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Earnings Management and Managerial Honesty: The Investors' Perspectives

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November 2020

Rajna Gibson Brandon
University of Geneva, GFRI, and ECGI

Matthias Sohn
European University Viadrina Frankfurt

Carmen Tanner
Zeppelin University, University of Zurich

Alexander F. Wagner
University of Zurich, Swiss Finance Institute, CEPR and ECGI

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Abstract

Extant research shows that CEO characteristics and moral preferences affect earnings management. This paper studies how investors infer CEOs' moral preferences from earnings management and how this perception – in conjunction with their own social and moral preferences – shapes their investment choices. We conduct two laboratory experiments simulating investment choices. Our results show that participants perceive a CEO to be more committed to honesty when they infer that the CEO engaged less in earnings management. For investment decisions, a one standard deviation increase in a CEO's perceived commitment to honesty compared to another CEO reduces the relevance of differences in the CEOs' claimed future returns by 40%. This effect is most prominent among investors with a proself value orientation. To prosocial investors, their own honesty values and those attributed to the CEO matter directly, while returns play a secondary role. Overall, perceived CEO honesty matters to different investors for distinct reasons.

Keywords: Earnings management, honesty, investor preferences, investor segmentation, protected values

JEL Classifications: M41, G41, G11

Rajna Gibson Brandon*
Professor of Finance
University of Geneva, The Geneva Finance Research Institute
40 Boulevard du Pont d'Arve
1211 Geneva 4, Switzerland
phone: +41 223 798 983
e-mail: rajna.gibson@unige.ch

Matthias Sohn
Chair of Management Accounting
European University Viadrina Frankfurt
Große Scharrnstraße 59,
15230 Frankfurt (Oder), Germany
e-mail: sohn@europa-uni.de

Carmen Tanner
Chair of Business Psychology and Leadership Ethics
Zeppelin University
Am Seemoser Horn 20,
88045 Friedrichshafen, Germany
e-mail: carmen.tanner@zu.de

Alexander F. Wagner
Associate Professor of Finance
University of Zurich, Department of Banking and Finance
Plattenstr. 14
8032 Zürich, Switzerland
phone: +41 446 343 963
e-mail: alexander.wagner@bf.uzh.ch

*Corresponding Author

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Rajna Gibson | Matthias Sohn | Carmen Tanner | Alexander F. Wagner

Center for Advanced Studies on the Foundations of Law and Finance | House of Finance | Goethe University
Theodor-W.-Adorno-Platz 3 | 60629 Frankfurt am Main | Germany
www.lawfin.uni-frankfurt.de

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Rajna Gibson
University of Geneva

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European University Viadrina Frankfurt

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Zeppelin University and University of Zurich

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Rajna Gibson, Matthias Sohn, Carmen Tanner and Alexander F. Wagner *

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*Gibson: University of Geneva. Address: The Geneva Finance Research Institute, University of Geneva, 40 Boulevard du Pont d'Arve, 1211 Geneva 4, Switzerland. Email: rajna.gibson@unige.ch. Sohn: European University Viadrina Frankfurt (Oder), Address: Chair of Management Accounting, European University Viadrina Frankfurt (Oder), Große Scharrnstraße 59, 15230 Frankfurt (Oder), Germany. Email: sohn@europa-uni.de. Tanner: Leadership Excellence Institute Zeppelin, Zeppelin University, and Department of Banking and Finance, University of Zurich. Address: Zeppelin University, Am Seemoser Horn 20, 88045 Friedrichshafen, Germany. Email: carmen.tanner@zu.de. Wagner: Swiss Finance Institute -- University of Zurich, CEPR, and ECGI. Address: University of Zurich, Department of Banking and Finance, Plattenstrasse 14, 8032 Zurich, Switzerland. Email: alexander.wagner@bf.uzh.ch. We thank the Swiss Finance Institute, the NCCR FINRISK, the UZH Research Priority Program Finance and Financial Markets, the Swiss National Science Foundation (PP001-102845) and the ERC (FP7/2007-2013, grant agreement 249415 RMAC) for support. The paper has benefited significantly from a fellow visit of Alexander Wagner at the Center for Advanced Studies Foundations of Law and Finance funded by the German Research Foundation (Deutsche Forschungsgemeinschaft, DFG) - project FOR 2774. Participants at the American Economic Association (AEA) Annual Meeting 2017, ESA European Meeting 2016, the Financial Management Association (FMA) Annual Meeting 2017, the Conference of the German Society for Psychology 2016, the Conference of the Swiss Society for Financial Market Research (SGF) 2017, the Swiss Finance Institute Research Days 2017, TIBER 2016, the VHB Annual Meeting 2017, the Higher School of Economics, the University of Innsbruck, the University of Nottingham, and Goethe University Frankfurt provided helpful comments. We thank Galen Bodenhausen, Peter Bossaerts, Alice Eagly, Gerlinde Fellner, Harrison Hong (AEA discussant), Da Ke (FMA discussant), Douglas L. Medin, Susanne Neckermann, Daniel Urban (SGF discussant), Bernhard Reichert, and Richard J. Zeckhauser for valuable comments on previous versions of this manuscript. The authors declare that they have no relevant or material financial interests that relate to the research described in this paper. This paper was previously circulated under the title "Investing in managerial honesty."

1 Introduction

This paper examines how past CEO engagement in earnings management signals moral preferences of the CEO to investors and how these perceived CEO moral preferences - together with investors' social and moral preferences - shape their future investment decisions. We do so as extant research shows that many investors care not only about the financial dimension of their investments, but also have non-pecuniary motives (e.g., regarding firms' ESG profiles, as in Riedl and Smeets (2017)). We add to this literature by highlighting the pivotal role of moral motives - specifically perceived managerial commitment to honesty - in shaping investors decisions to invest in certain firms.

This paper addresses two fundamental research questions: (a) How do investors assess a CEO's commitment to honesty (b) how do different types of investors react to their assessment? We propose that investors use information about a CEO's past engagement in earnings management as a proxy for managerial honesty. Specifically, H1 holds that investors' perceptions of the CEOs' earnings management correlate *negatively* with investors' perceptions of the CEOs' commitment to honesty. This hypothesis is motivated by recent accounting research showing that investors trust in managers' operating, investing, reporting, and financing decisions decreases after investors learnt that managers engaged in earnings management (Hewitt et al. 2020). We build on and extend this idea by proposing that investors also draw inferences about moral preferences of the CEOs from their past engagement in earnings management. This hypothesis is motivated by a large literature that has established that individuals experience intrinsic costs of lying (Gneezy 2005; Gibson et al. 2013; Murphy et al. 2020), and that the resistance to mispresent facts to increase personal benefits minimize individuals' lying costs.[1]

[1] Importantly, there are reasonable arguments for why investors may make different inferences. Perceptions of the CEOs' earnings management may correlate *positively* with perceived CEO honesty. This situation occurs if investors think that earnings management conveys valuable private information, which the non-earnings-managing CEO

We further propose that investors are willing to trade off their perception of the CEOs' commitment to honesty with the CEOs' claimed future returns when making investment decisions. Naturally, we expect investors to invest with the CEO claiming higher future returns. However, importantly, H2 posits that the higher the investors' perception of a CEO's commitment to honesty relative to another CEO is, the more investors discount differences in claimed future returns between the two CEOs.

To better understand the channels driving these hypotheses, we further consider investors' social and moral preferences. We propose that more self-oriented ("proself") and more social-oriented ("prosocial") investors differ in the way they interpret and use the information about the CEOs' commitment to honesty to make future investments. H3 posits that proself investors care about announced future returns being credible. Thus, their perception of a CEO's commitment to honesty should interact with the claimed future returns. By contrast, prosocial investors place more emphasis on moral considerations as such than on future returns. Hence, we expect prosocials to invest more heavily with the CEO with whom they share a similar commitment to honesty. This is motivated by an increasing body of research highlighting the pivotal role of the congruity between firm and investor values in stock market participation (e.g., Nilsson (2008); Bauer and Smeets (2015); Hong and Kostovetsky (2012)).

To test our hypotheses, we conduct two experiments. The general design of both experiments is that students with different backgrounds and financial literacy, as proxies for investors with different social and moral preferences, as well as different degrees of sophistication, make decisions to invest with one of two companies. Participants receive information about two companies, which are identical, except that the CEOs announced different earnings per share (EPS) and thus were awarded different bonus payments. Participants are

withheld. Finally, investors may see earnings management as *uncorrelated* with managerial honesty (but may see earnings management as a signal of more competence on the part of the CEO).

informed that a CEO can influence reported earnings in a legally acceptable manner and that a CEO can increase his bonus by announcing higher earnings. Participants decide in which company to invest in a series of four choices. Each choice differs regarding future returns claimed by the two CEOs. Participants are also asked to state their perceptions of the CEOs' commitment to honesty (amongst other CEO traits). We draw on the concept of "protected values for honesty" to assess the investors' perception of each CEO's commitment for honesty.[2] In Experiment 2, we additionally collect data on social and moral preferences of the participants.

Experiment 1 and a separate survey strongly support H1. Most participants infer that the CEO who announced higher past earnings and received a higher bonus managed earnings more than the other CEO. They also tend to perceive this latter CEO to be more committed to honesty.[3] Finally, participants' perceptions of the extent to which a CEO engaged in earnings misrepresentation correlate strongly negatively with perceptions of that CEO's honesty.[4]

Experiments 1 and 2 provide strong evidence that participants tend to prefer the CEO with higher claimed future returns and higher perceived commitment to honesty. More importantly, we also provide strong support for H2: Participants become less sensitive to differences in returns claimed by the two CEOs, the more they perceive a CEO to be committed to honesty relative to the other. A one standard deviation increase in a CEO's perceived commitment to honesty compared to another CEO reduces the relevance of differences in claimed future returns by about 40%, a sizeable effect.

The results of Experiment 2 also support H3. First, we find that proself participants are sensitive to claimed future returns, but the more they perceive a CEO to be committed to honesty

[2] This concept has been rigorously tested in the psychology, economics, and neuroscience literature (e.g., Tanner et al. (2009), Gibson et al. (2013), and Dogan et al. (2016)). It correlates positively with moral identity (Aquino and Reed 2002), ethical idealism (Forsyth 1980), and deontology and intuitionism (Witte and Doll 1995).

[3] In both dimensions, there is substantial variation among participants. Importantly, they do not assign differential competences to the CEOs.

[4] Whether or not participants have investment experience and the extent to which they are familiar with financial news is unrelated to their assessment of CEO values. All results hold controlling for these and other demographic factors.

relative to the other, the less return-sensitive they become. This is because proselfs optimize their risk-return profile and trade off two factors: On the one hand, they seek higher returns; on the other hand, they seek a lower probability of the promised returns not materializing.[5] Second, prosocial participants invest with the non-earnings management CEO when they themselves are committed to honesty, or when they perceive the CEO as the more honest CEO. We also observe a complementarity between these participants' perception of CEO honesty and their own commitment to honesty. Finally, returns announced by the CEOs do not interact with these participants' own or the CEO's perceived commitment to honesty.

This research makes three contributions to the literature. First, our research contributes to the accounting literature showing that earnings management decreases managers' reporting credibility and that investor confidence in managers' actions and reporting decisions affects investment choices (e.g., Graham et al. (2005), Mercer (2005), Elliott et al. (2012), Eugster and Wagner (2020), and Hewitt et al. (2020)). We add to this literature by showing that past earnings management practices also affect investors' perception of managers' moral preferences, i.e. their commitment to honesty.[6] This is a novel and important contribution, as our results suggest that investors respond differently to future return claims depending on both their perception of CEOs' commitment to honesty and their own social and moral values. This has implications for investors' relationship management undertaken by large firms who need to cater to different value driven clienteles of investors. Ultimately, our results imply that firms run by more honest CEOs are able to access more capital and at lower cost.

Second, we contribute to extant accounting research highlighting the role of managers' traits on reporting quality. This research finds that, amongst others, managers' risk-aversion

[5] The overall behavioral patterns observed in Experiment 1 are thus likely to be driven by these individuals.
[6] We also measure and control for investors' perceived CEO trustworthiness. We find that participants indeed invest more heavily in the CEO whom they attribute higher trustworthiness, which supports prior research. However, trust does not interact with claimed returns and, importantly, all our results concerning the role of perceived commitment to honesty hold when controlling for perceived CEO trustworthiness.

(Graham et al. 2013), overconfidence (Schrand and Zechman 2012), masculinity (Jia et al. 2014), and narcissism (Ham et al. 2017; Capalbo et al. 2018) affect firm engagement in earnings misreporting. Our research is the first to look at the flipside of the coin, namely that - in the absence of any observable information about the CEO values – investors infer CEO traits from their earnings management practices. This is important as firms need to be aware that increasing or smoothing earnings (and related bonuses) by engaging in earnings misreporting negatively affects investors' perception of managers' traits (even though it may have other advantages).

Third, this paper extends a developing research stream on how moral or social values of the investors shape their decision making (e.g., Pasewark and Riley (2010) and Hong and Kacpercyk (2009)). While there is a large literature on clientele and segmentation effects, few papers examine how investors' moral, religious and social characteristics shape investment decisions. An important exception is Hong and Kacperczyk (2009) who highlight that certain groups of institutional investors may shun sin stocks. The authors focus mostly on prosocial investors. Our results for prosocial investors support this research. Our results further show that even among the proself investors, CEO honesty matters – not directly for moral reasons, but because it helps these investors secure their investment goals. This aligns with research on social responsible investment (SRI) demonstrating that some investors invest with firms high in environmental, social and governance (ESG) performance because they hold environmental and social values, whereas others invest in high ESG firms to lower investment risk or to comply with an insurance motive (Jansson and Biel 2011; Zolotoy et al. 2019). Accordingly, firms need to be aware that legal, but morally questionable behavior such as earnings management signals low managerial honesty to the market and that this negatively affects different types of investors for distinct reasons.

2 Theory and Hypotheses

2.1 Earnings Management

Research has found that managers extensively use legal opportunities to modify reported earnings (e.g., Burgstahler and Dichev (1997) and Degeorge et al. (1999)).[7] Several papers also highlight ethical concerns with earnings management even if such behavior remains within legal boundaries and accepted accounting standards. Dichev et al. (2016) refer to earnings management as "prevalent but still problematic" (p. 27). Healy and Wahlen (1999) state that earnings management occurs when managers "choose reporting methods and estimates that do not accurately reflect their firms' underlying economics" (p. 366) with the goal "to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers" (p. 368). Jensen (2005) refers to earnings management as an act of "lying" (p. 8).

Incentives also play a major role. Extant research finds that managers engage in earnings management to increase their individual bonus (Holthausen et al. 1995; Guidry et al. 1999) and the value of their equity-based wealth (Bergstresser and Philippon 2006). Importantly, research also suggests that stable manager traits, such as overconfidence (Schrand and Zechman 2012), masculinity, and narcissism, affect firms' engagement in earnings management. In this paper, we test whether investors infer managers' traits, specifically CEOs' commitment to honesty, from past earnings management practices and how this CEO moral perception, in turn, shapes their future investment decisions.

[7] There is also real earnings management, achieved by changing the timing of spending in investing or financing operations with the intention to manipulate the reported earnings (Schipper 1989; Roychowdhury 2006; Gunny 2010; Zang 2012).

2.2 The Effect of Earnings Management on Investors

How do investors react to managers engaging in earnings management? A developing stream of research suggests that investors react negatively, as they perceive such behavior as deceptive (Bentley et al. 2020), which, in turn, decreases investors' trust in the managers' reporting decisions (e.g., Graham et al. (2005), Mercer (2005), Elliott et al. (2012), Eugster and Wagner (2020), and Hewitt et al. (2020)). The analysis most closely related to our paper is the experiment by Hewitt et al. (2020), who find that earnings management decreases investor trust in managers' operating, investing, and financing decisions and, hence, investors state that they would have a tendency to decrease the relative importance of these firms in their portfolios. We build on this research but extend it in three ways. We first test the proposition that investors infer commitment to honesty from managers' prior engagement in earnings management and second show that investors use this information when making investment decisions. In doing so, we draw on research which has robustly shown that when forming impressions about others, individuals weigh moral character information more than competence information (e.g., Goodwin et al. (2014)). Third, and most importantly, we examine how different types of investors use the perception of CEO commitment to honesty to form their future investment choices.

2.3 How Investors Perceive CEOs: The Honesty Inference Hypothesis

Before we develop our main prediction, consider first the baseline, where honesty inferences play no role. To fix ideas, consider an investor who decides whether to invest with CEO A or CEO B. Let R_c denote the returns promised by CEO *c*. Both promised returns are positive. Suppose first that the investor's information set regarding the two CEOs is identical. We also posit that the investor has constant marginal utility and cares only about returns. Expected utility is defined as follows:

(1) $$V = \begin{cases} p^0 R_A + (1 - p^0)0 \text{ if } A = 1 \\ p^0 R_B + (1 - p^0)0 \text{ if } A = 0 \end{cases},$$

where *A* is the choice variable (investment in A). Given the identical information about the two CEOs, the investor has, for each CEO, the same prior p^0 that the CEO's promised returns come through. Investing with A means not investing with B. Defining $\Delta Return = R_A - R_B$, here abbreviated as ΔR, an investor prefers to invest with A when he receives higher expected utility from investing in A than from investing in B, that is, when

(2) $$p^0 \Delta R > 0.$$

Without further information, an investor will tend to invest with *A* if *A* promises higher returns than *B*. This is true for any prior that is identical for the two CEOs (though it is reasonable to posit $p^0 = 1/2$).[8]

Suppose now that the investor has additional information beyond the announced future returns. Specifically, the investor has information regarding past earnings announcements and the associated bonus payments. Concretely, the investor knows that B announced higher earnings than A, and that B received a higher bonus.

First, based on the large literature that establishes a link between monetary incentives and earnings management, we expect the investor to infer that B has managed the earnings more than A. However, investors can be expected to differ in the strength of that inference. Second, our primary interest focuses on the inferences regarding honesty. If market participants know that there are some principled managers, then not reporting managed earnings will lead investors to infer that these managers are more committed to honesty. Thus, we conclude:

[8] Empirically, in line with standard practice, we assume that the comparison of the utilities translates into a decision based on a random choice model, incorporating an error term ε, which is independent of the explanatory variables**.** By assuming that ε has the logistic distribution, one obtains the logit model, which is the main specification on which we focus in the empirical implementation. Thus, while we do not expect 100% investment in A as soon as ΔR is minimally positive, we do expect investment in A to increase as ΔR increases.

***Honesty inference hypothesis (H1)*:** The more an investor infers that a manager has engaged in earnings management, the less committed to honesty the investor perceives that manager.

Given that we expect investors to infer A to have managed earnings less than B, H1 asserts that on average they will regard A as more honest than B. Therefore, the difference in perceived commitment to honesty between CEO A and CEO B, which is empirically proxied by the difference in attributed protected values for honesty of both CEOs (Δ*CEO_PVHon*), is expected to be *positive*. It is also possible, however, that some investors actually regard CEO B as more honest. That would occur if these investors consider earnings management as a tool to convey private information, as suggested by, for example, Gunny (2010), Watts and Zimmerman (1986), Guay et al. (1996), Arya et al. (2003), and Perotti and Windisch (2017). This would predict Δ*CEO_PVHon* to be *negative* on average. Finally, it is possible that investors do not actually infer anything about managerial honesty from perceived earnings management. Investors may have in mind a world like in Stein (1989), which does not allow for the possibility that a manager experiences psychological or moral costs when managing earnings. There, CEOs manage earnings in equilibrium (though the market is not fooled by this earnings management in equilibrium). Specifically, a manager that does not manage earnings would be assumed to be of low quality. Thus, investors would not see differences in honesty between the CEOs (so that Δ*CEO_PVHon* would be indistinguishable from zero). However, they may attribute higher competence to CEO B than to CEO A (assuming that they regard CEO B as having managed earnings more).

2.4 Investment Decisions: The Dishonesty Discount Hypothesis

We next turn to how investor inferences regarding managerial honesty affect their investment choices. If investors believe that past honest reporting is an indication of a CEO to always

announce the truth, they will also assign a higher probability to the CEO's future announced returns to materialize. They update estimated probabilities for A and B reporting their promised returns accurately from the common prior p^0 to the posteriors p^A and p^B, respectively, where $\Delta p = p^A - p^B$ is on average *positive*. (Appendix A.1 spells out the details of Bayesian updating in the present case.) Thus, Δ*CEO_PVHon* provides a proxy for Δp.

The investor decides to invest with A if

(3) $$p^A R_A - p^B R_B > 0, \text{ or } \frac{p^A}{p^B} > \frac{R_B}{R_A}.$$

Three predictions follow. First, investors prefer to invest with CEO A, the higher the promised future returns of CEO A relative to CEO B. Second, equation (3) implies that higher attributed protected values for A should, as a proxy for the probability of delivering the promised returns, be positively associated with investment choices into A. Third, equation (3) indicates the substitutive roles of attributed protected values and announced returns: Intuitively, even if the difference in promised returns between CEO A and CEO B is negative, that is if $\Delta R < 0$, the investor may choose A if Δp is sufficiently large. In the extreme case where this difference approximates unity, differences between returns matter less and less. Investors discount differences in claimed future returns by the two CEOs more the higher the investors' perception of the commitment to honesty of a given CEO relative to another CEO. Thus, our study differs from Hewitt et al.'s (2020) approach, as we examine how earnings management affects incentivized investment judgments that entail "real" trade-offs between returns and moral motives (i.e., investing with the honest manager).

To illustrate, Figure 1 presents the percentage of investors expected to invest in A for varying Δp. The figure is centered around the case where $\Delta p = 0$, that is, when an investor's posterior is equal to the prior. The solid line shows the expected behavior if $\Delta R = R_A - R_B > 0$. Thus, even when $\Delta p = 0$, the investor is more likely to invest with A. In the region where $\Delta p >$

0, it is even more attractive to invest with A than with B. In the extreme, where Δp goes towards one, that is, where the investor regards A as much, much more honest than B, the probability of investing in A approximates unity.

-Figure 1 about here-

Importantly, even when $\Delta R = R_A - R_B < 0$, plotted with the dashed line, the same limiting outcome obtains: Even if A promises lower returns than B, as long as A is estimated to be sufficiently more likely to deliver than is B, the investor will tilt towards A. Thus, we observe the solid and dashed curves approximating each other towards the right, meaning that the importance of future returns diminishes as the posteriors diverge. By contrast, return differences play a bigger role for determining the ultimate decision when posteriors are similar, as in the middle of the figure.[9] For completeness, consider what happens in the left part of the figure, where $\Delta p < 0$. Intuitively, if investors regard B as more honest than A, return differences between A and B matter less; they will tend to invest with B.[10]Thus, we can now state H2:

Dishonesty discount hypothesis (H2): The higher the investor's perception of the commitment to honesty of a CEO relative to another CEO, the more an investor discounts differences in claimed future returns between these two CEOs.

2.5 Differences Among Investors: The Investors' Motives Hypothesis

We propose that investors care about perceived managerial honesty and are even willing to invest with the CEO claiming lower returns if their assessment of that CEO's commitment to honesty is sufficiently high. There are two interpretations of this result, which we test in Experiment 2.

[9] When ΔR is bigger, the two lines would be further out, but would again converge to 100% and 0%, respectively, at the right and left limits. When ΔR approximates zero, there would be a straight, diagonal line. The shape of these lines is also implicitly determined by the marginal utility of money of investors. In Experiment 2, we control for whether investors have proself and prosocial value orientations to partially capture this distinction.

[10] Even if investors do not infer differential honesty of managers, they may make predict differences in the managers' probability to deliver the promised returns. Specifically, as mentioned above investors may infer the earnings-management CEO to be more competent, and to the extent that investors associate this inferred competence with the likelihood of future claimed returns coming through, they infer $\Delta p = p^A - p^B$ to be on average *negative*. Investors may then discount the returns claimed by a CEO whom they regard as incompetent.

On the one hand, some investors may assign higher credibility to this CEO's announcements regarding the future returns. Thus, even when CEO A claims lower future returns than CEO B, these investors may not feel that they are bearing an opportunity cost by investing with CEO A because they do not regard CEO B's predictions as credible enough. On the other hand, it may be that some investors are, in fact, willing to pay a price for investing with the CEO they regard as more honest. This possibility can in particular arise if some of the investors themselves hold honesty as a protected value and at the same time care about rewarding the non-earnings management CEO or a CEO who shares their values by investing with him (and, conversely, "punishing" the earnings-management CEO by withholding funds from him).

To examine which of these two mechanisms drive behavior (and for whom), in Experiment 2, we collect data on investors' social value orientation as well as on their own commitment to honesty. These measures of investor characteristics allow us to test H3, which makes different predictions for proself and prosocial investors. We base our predictions on extensive psychology research which suggests that proselfs (who care primarily about their own outcomes) tend to interpret information about the characteristics of others by considering the implications for their own welfare, prosocials (who care about their own and others' outcomes) tend to interpret such information from a moral perspective (e.g., De Bruin and Van Lange (2000)). Furthermore, research has also demonstrated that perceived self-other similarity in honesty is of greater importance for prosocials than for proselfs (Van Lange and Kuhlman 1994). Because we expect moral motives to matter more for prosocial investors, we collect data on investors' own commitment to honesty.

Specifically, we expect proself investors to be return-sensitive, but also to discount differences in claimed returns by considering differences in perceived CEO honesty, as a more honest CEO can be expected to deliver what he has claimed to deliver. In contrast, prosocial

investors' tendency to invest in CEO A should be positively associated with their honesty values, and with their relative assessment of that CEO's honesty. Return differences between the two CEOs should be less important to them. As to the theoretical framework introduced in Section 2.3, this analysis can be captured by extending the investor's utility function to consist also of a second part that is unrelated to financial returns but that directly takes into account the perceived honesty of the CEO as well as the investor's own commitment to honesty. Proself investors would put more weight on the original term, involving returns, in the utility function in Section 2.3, whereas prosocial investors would put less weight on that returns-related part and more weight on the second term in the utility function. In sum, we posit that:

Investors' motives hypothesis (H3): Proself investors care about announced future returns being credible; prosocial investors prioritize consistency with their own moral considerations and are less concerned with future returns.

3 Method

3.1 Experiment 1 and Additional Survey

A total of 141 students from the University of Zurich participated in this fully anonymous experiment.[11] The full instructions are in the Supplementary Appendix. Of this sample, 63% were business/economics/finance and 37% were psychology students; 42% were women; the median

[11] Experimental simulation of investor decision-making raises questions about external validity. As is often done in research, we conduct the experiments with students. This is a relevant sample for this study because real-world investors, like students, possess heterogeneous backgrounds and in particular different levels of financial literacy. Do experimental participants understand what they are doing? Many studies in experimental accounting use student participants to study complex trading and other behavior (Koonce et al. 2010; Asay et al. 2018; Elliott et al. 2018; Krische 2005; Tan et al. 2015; Elliott et al. 2015), or place students in the situation of corporate decision-makers (e.g., Brown (2014)). Note that many studies find that the behavior of professional decision makers does not qualitatively differ from that of student subjects (DeJong et al. 1988; Dyer et al. 1989; Sade et al. 2006; Smith et al. 1988), and finance professionals and lay people have similar risk perceptions (Holzmeister et al. 2019). Other studies find that professionals behave differently (Alevy et al. 2007; Kirchler et al. 2018), though even for professionals, relatively soft priming interventions affect behavior (Cohn et al. 2017). In light of this heterogeneous evidence, we include participants with and without familiarity with financial decisions.

age was 23. Although we had more male participants and more economics students than females and psychology students, respectively, we have a sufficient degree of demographic variation.

The instructions informed participants that they would be in the situation of an investor who has to make several decisions to invest with one of two companies. They were also informed that they would be paid at the end of the experiment. Participants received a fixed amount of CHF 10 (≈ US$ 10) for their participation and a variable amount up to CHF 5, depending on their choices in the decision tasks and the success of their investment.[12]

Participants were then provided with some information about the two companies, which were described to be identical, except that CEO of firm A and CEO of firm B reported different earnings per share (EPS) and thus received different remunerations. More specifically, CEO A announced lower EPS (31 cents) than expected by the market (35 cents) and accordingly received a lower remuneration of CHF 1,300,000. In contrast, CEO B' announced EPS matched market expectations and thus his remuneration was higher and amounted to CHF 2,200,000 (see Appendix A.4 for details).

We chose the difference in announced earnings to roughly correspond to the magnitude of earnings management in practice.[13] We limited the difference between the CEOs to one salient observable dimension of managerial behavior to most clearly identify the influence of perceived CEO commitment to honesty on investor actions.[14,15]

[12] Several studies show that the levels of payments received by participants have no major effects on their behavior if the participants are paid proportionately to the opportunity cost of their time (see Davis and Holt (1992) for an overview).

[13] Dichev et al. (2016) find that public company CFOs believe that about 10 cents of every dollar in earnings is typically misrepresented for companies engaging in within-GAAP earnings management. Private companies' CFOs believe that the extent of misrepresentation is even higher.

[14] This setup is the flip-side of the setup in Gibson et al. (2013), in which participants, cast in the role of CEOs, know that the actual earnings per share are 31 cents, whereas the consensus estimate is 35 cents. In that experiment, using earnings management to announce 35 cents amounts to dishonest financial reporting.

[15] We anticipated that based on the instructions participants would perceive CEO B to have managed the reported earnings more than CEO A, and that these differences in the perception of CEO engagement in earnings management would in turn be negatively correlated with participants' perceptions of the CEOs' honesty. While this dual assumption seemed straightforward at the time we conducted the experiment, we later recognized that validating this process would be important. We therefore conducted a separate survey.

Participants then had to respond to several test questions to ensure that they understood the task of the experiment. They could not proceed until they had answered all questions correctly. Furthermore, participants indicated on bipolar scales (from -2 to +2) to which extent they judged CEO A and CEO B as *trustworthy* vs. *not trustworthy*, *short-term* vs. *long-term oriented* and *willing to make financial sacrifices* vs. *not willing to make financial sacrifices*.

Participants then faced four investment choices (in randomized order), which varied regarding claimed future returns by the CEOs. We limited investor choices to investing with either A or B (rather than offering them a continuum) to most clearly highlight the fact that investing with one entails a lost opportunity of investing with the other. In two choice situations, CEO B announced a higher future return than CEO A, and in the other two choice situations, CEO A announced a higher future return than CEO B.

Overview of the four different investment choices
[not shown as a table to participants]

Choice	Company	Claimed returns in %	Return difference (CEO A–CEO B) in %: *ΔReturn*
1	CEO A CEO B	10 40	- 30
2	CEO A CEO B	20 30	- 10
3	CEO A CEO B	30 20	+10
4	CEO A CEO B	40 10	+30

Participants were informed of the amount that they could receive from each investment choice if the predicted increase in shareholder value materialized. The participants also learned that if the investment turned out to be unsuccessful, they would only receive their investment back, but no additional return. The variable *ΔReturn* captures differences in claimed future returns on the investment between CEO A and CEO B (future return claim CEO A minus future return claim CEO B), thus ranging from -30% to +30%. We did not specify which CEO would be

more likely to deliver the announced returns. Instead, we expected that different investors would draw different (Bayesian) inferences from this situation.

The four investment choices were presented sequentially on separate pages, and in each case the amounts the participants would receive were indicated in parentheses (see Appendix A.4 for details). There was no feedback regarding whether the investment was successful immediately after each choice; payouts were only communicated at the end of the experiment.

We then measured participants' assessment of each CEO's commitment to honesty.[16] For this, we drew on the concept of protected values for. Generally, protected values refer to core (deontic) values to which individuals are intrinsically committed to and which they believe ought to be excluded from utilitarian trade-offs, (e.g., Baron and Spranca (1997), Tanner and Medin (2004), and Tetlock et al. (2000)). We used the measure developed and validated by Tanner et al. (2009) and applied in Gibson et al. (2013).[17] Prior studies have tested the scales for their psychometric qualities and revealed that this protected values measure is effectively uncorrelated with social desirability but reflects strong moral stances and core beliefs (Tanner et al. 2009; Merz and Tanner 2009). Importantly, for this present study, individuals scoring high on the protected values scale respond less to economic incentives to lie (Gibson et al. 2013). Also, Dogan et al. (2016) provide evidence that when compared to other candidate measures (e.g. HEXACO, moral identity), the protected values measure is the strongest predictor of resistance to economic incentives.

In this first experiment, we were interested in how participants *perceived* CEO A's and CEO B's respective commitment to honesty as measured by the protected values scale. All items

[16] One caveat of our experimental setup could be that participants' perceptions of the two CEOs' commitment to honesty might not only depend on the CEOs' earnings announcements but also, for self-consistency reasons, on their investment choices. Evidence from an additional questionnaire suggests that this was not the case (see Section 4.3).
[17] The protected values for truthfulness scale we use in the main analysis aggregates two distinct but related subscales. One subscale captures emotional reactions to (real or anticipated) violations of honesty, while the other one captures the notion of an individual's unwillingness to consider trade-offs regarding honesty based on cost-benefit analyses.

were rated on 7-point scales (see Appendix A.4). The average of all responses forms an index of Perceived $PV_{honesty}$ (for each CEO), *CEOA_PVHon* and *CEOB_PVHon*. The scales have high internal consistency, as assessed by Cronbach's Alphas ($\alpha_{CeoA} = .93$, $\alpha_{CeoB} = .90$). Δ*CEO_PVHon* is the difference in perceived commitment to honesty between CEO A and CEO B (*CEOA_PVHon - CEOB_PVHon*).

At the end, participants were debriefed and paid. While, as described above, the ex-ante relationship between investment and payment was left ambiguous to reflect real-life situations, the ex-post relationship between investment and payments was based on the following reasoning. If a CEO announced past earnings (dis)honestly, then he would also be (dis)honest about claimed future returns. Thus, CEO A delivers the announced future returns, and the participants received the payout accordingly. By contrast, the future returns claimed by CEO B did not come through as announced by him, and participants received zero variable payment when they invested in his company.[18] To guarantee anonymity and minimize impression management tendencies, participants chose a code at the beginning of the experiment. Another person of the research team (not the experimenter), staying in another room, prepared an envelope containing the money. Participants received the sealed envelope from the experimenter when indicating their code.

In a separate step (additional survey), we administered a survey to 132 business, economics, and finance students from the University of Zurich. None of the participants took part in one of the two experiments. We excluded 7 participants because they stated that they did not answered carefully, and 13 participants whose responses took extremely short or extremely long time. Of the remaining 112 participants, 30% were women; the median age was 21. Survey

[18] For example, if CEO A claimed 10% and CEO B claimed 30% as a future return, individuals investing in A received 10% of 50,000 / 10,000 = CHF 0.5, while individuals investing in B received nothing. Thus, the maximum of CHF 5 was reached when they invested with CEO A across all choice situations. It is possible that some participants would have made their choices systematically in favor of CEO B thinking that they would earn more since they were told that this CEO managed the earnings within legal limits. However, if that had been the case, we would have observed a skewed pattern in favor of CEO B in the results. This turned out not to be the case.

participants were presented with the same case description as provided in the experiment, followed by several test questions to ensure that they understood the task. They could not proceed until they had answered all questions correctly. Then, participants indicated their perceptions about the two companies and the two respective CEOs, using various categorical scales, about the CEOs' engagement in earnings management ("*Did the two CEOs manage the earnings using legal accounting procedures?*"), their risk tolerance ("*Do the two CEOs differ regarding their risk tolerance*"), their honesty ("*Do the two CEOs differ regarding their honesty?*"), and their competence ("*Do the two CEOs differ regarding competence?*") (in randomized order). The full survey is in Appendix A.4.

3.2 Experiment 2

This experiment consists of two parts, about one week apart: a survey (online) and an investment decision task (laboratory). The sample consisted of 164 participants. Fourteen participants had to be excluded either due to extremely long process time required to finish the online survey (z-transformed process time > 2 SDs; 2 participants), very young age (< 19 years old; 7 participants), or due to mismatching identification codes between the two tasks (5 people)). Of those 150, 60% were psychology students, 37% economics and 3% students of other disciplines; 68% were women. The median age was 21.[19] 29% of the participants had made stock investments themselves, and the median participants reviewed financial news at least on a weekly basis, though there was broad variation among participants, as indicated by the SD of 1.27 on a scale from 1 (never) to 5 (daily). In the main analysis, we use 132 because 18 could not be classified according to the standard social value orientation criterion (see Section 4.2.2). None of the participants had participated in Experiment 1.

[19] We highlight for the reader that the composition of this sample is different than the one observed in Experiment 1. Results for Experiment 1 show that field of studies is not significantly associated with investment choices. In Experiment 2 as well, we find that demographics do not explain investment choices.

Participants received a fixed amount of CHF 10 for their complete participation in both tasks and a variable amount up to CHF 5, depending on their responses in the investment decision task. The participation fee and the outcome-based remuneration rule mirrored the ones used in Experiment 1.

Survey: Participants first completed an online survey that was designed to assess demographic characteristics and a variety of personal attitudes and values. We assessed each participant's own protected values for truthfulness (*Investor_PVHon*) and social value orientation (*Investor_SVO*). *Investor_PVHon* was assessed with the original nine-item protected value index (Gibson et al. 2013; Tanner et al. 2009). The average of the responses across all nine items was used, yielding a high Cronbach's Alpha (α = .85). Social value orientation (*Investor_SVO*) is a concept and measure widely used in psychology and has also recently been used in accounting e.g., Cardinaels and Yin (2015)).[20]

Investment Task: This second task and its procedure were identical to the investment task used in Experiment 1.[21]

The first and second tasks took place at least one week apart. The time lag mitigates concerns that participants would merely provide answers that were self-consistent when performing the investment task. To guarantee anonymity, participants chose their identification code, which was also valid for the second task.

[20] It was measured by the commonly applied and rigorously tested Decomposed Game Measure (see for details, Van Lange et al.(1997)). SVO has been extensively tested and proven to be unrelated to social desirability (Platow 1994; Van Dijk et al. 2004; Van Lange et al. 2007). The task consists of nine trials. The trials are not monetarily incentivized, but extant literature has demonstrated excellent psychometric qualities for the measure (see e.g., Van Dijk et al. (2004) for an overview of studies). In each of them participants are asked to choose one of three combinations of outcomes for themselves and for an (anonymous) other. In line with extant studies we categorized participants as prosocial when they chose the cooperative alternative in at least six trials (out of nine). Participants were categorized as proself when they chose the individualistic or competitive option in six or more trials (out of nine). With this approach, 18 participants could not be categorized into one of the two investors' segments.

[21] In addition to the same bipolar items used in the previous experiment (such as *short-term* vs. *long-term oriented* etc.), we also asked to which extent CEO A and CEO B were seen as *credible* vs. *not credible* (from -2 to +2). We pooled the trustworthiness and credibility items into one single scale in Experiment 2. The results also hold for the single item trustworthiness measure (see the robustness check section). For the pooled variable CEO A is perceived more trustworthy (*mean* = 3.60, *SD* = 0.87) than CEO B (*mean* = 2.92, *SD* = 0.96), $t(150) = 5.19$, $p < .01$.

4 Results

4.1 Experiment 1 and Additional Survey

Overall, in Experiment 1, 61% of the participants chose to invest with CEO A. Recall that if investors regarded both CEOs to be equally likely to deliver the promised returns, we would expect 50% investing in CEO A, given that CEO A announced higher returns in half of the cases. In what follows, we seek to understand how the observed behavior arose. We begin by investigating perceived differences in honesty between the CEOs, and then turn to investment decisions. While we highlight some descriptive statistics in the text, the descriptive statistics of all variables are in Table A1 of Appendix A.2.

4.1.1 How Investors Perceive CEOs: The Honesty Inference Hypothesis

H1 holds that investors use the implicit information from the past earnings announcements as signals of the two managers' commitment to honesty. The results in Table 1 strongly support our hypothesis that participants perceived CEO A and B differently. Panel A first shows that, on average, participants perceived CEO B as less committed to honesty than CEO A. In Panel B, we compute a summary variable of the comparative honesty commitment perception for each participant. Specifically, we denote by *ΔCEO_PVHon* the difference in perceived commitment to honesty between CEO A and CEO B. Panel B shows that the vast majority of participants perceived CEO A to be more committed to honesty than CEO B. However, this is not a foregone conclusion: Some values of *ΔCEO_PVHon* are negative; specifically, 35 participants even perceived CEO B as more committed to honesty than CEO A.[22] To ease interpretation in the further analysis, *ΔCEO_PVHon* is standardized to mean zero and standard deviation of one.

[22] Results available upon request show that there were no systematic CEO perception differences across the participants with respect to their other categorizations (participants' gender, academic major, and age).

While the idea underlying our experiment indeed was that CEO B had managed earnings while CEO A had not and that, therefore, CEO B is less honest than CEO A, it is important to note that (as in the real corporate environment), investors did not receive the actual earnings signals that the two CEOs had received. It is, therefore, interesting to study, based on the separate survey, what investors inferred about the CEOs' earnings management choices.

As Panel C of Table 1 shows, participants strongly inferred CEO A to have managed earnings less than CEO B. The majority of participants (60%) perceived CEO B to manage the earnings more than CEO A, whereas only 26% perceived CEO A to manage the earnings more than CEO B. 3% perceived both CEOs to manage the earnings to the same degree, and 11% said that they could not provide an answer.

Panel C additionally shows that survey participants also perceived CEO A to be more honest than CEO B. Also, CEO B was perceived as more risk tolerant than CEO A. Hardly anybody inferred differences in professional competence between the two CEOs. Thus, importantly, CEO A is not just seen as "better" in all dimensions, and it is also not the case that a given participant would regard CEO A and CEO B as similarly different on all dimensions. Participants formed differential opinions regarding the CEOs on different dimensions.

-Insert Table 1 here-

To test for relations among the variables, in the survey data, we further run logit regressions explaining whether an investor perceived A as more honest than B with the other dimensions of CEO perceptions (suitably reordered). We find, while controlling for participant age and gender, a strong positive effect of perceiving CEO B as managing the earnings more than CEO A (z = 3.29, $p < .01$), but no significant effect of perceived relative CEO risk tolerance (z = 1.15, p = .25) nor of perceived relative CEO competence (z = 1.13, p = .26).

In sum, our experimental manipulation indeed led to the conjectured perceptions regarding earnings management (investors perceived CEO B to have managed the earnings more than CEO A), which in turn were associated with honesty inferences (investors perceived CEO A as more honest than CEO B). Overall, these results strongly support H1.

4.1.2 Investment Decisions: The Dishonesty Discount Hypothesis

We now study how perceived differences in CEO honesty are related to investment choices. Figure 2 displays investors' choices in Experiment 1 in favor of CEO A as a function of *ΔCEO_PVHon* and differences in claimed future returns (*ΔReturn)*. For presentation purposes, we pool the two positive and the two negative return differences, thus forming one category where CEO A claimed higher future returns than CEO B and one category where the opposite holds. We consider the return difference categories separately in the regression analysis below. Three main results can be gleaned from the figure: First, when CEO A claims higher returns, more participants choose to invest with CEO A. Second, the percentage of participants investing with CEO A increases the more CEO A is seen as committed to honesty, relative to CEO B.

-Insert Figure 2 here-

Third, the two lines converge going from left to right in the graph. That is, those participants who believe that CEO A is strongly committed to honesty relative to CEO B make their investments less dependent on the claimed returns. Conversely, those participants who believe that CEO A is only weakly committed to honesty are more sensitive to the claimed returns. These results mirror the predicted pattern in Figure 1.

To test whether these results also survive when controlling for other factors, we estimate logit regressions. Table 2 summarizes the results of our regression models, the investment in CEO A being the dependent variable. Because it is possible that there is systematic variation in how individuals of certain age, gender or training make inferences regarding traits of the CEOs

(including about traits which we did not ask participants about), we control for participants' *Age*, Gender (*Female)*, and academic major (*Economics*) in all regressions. We rarely find significant effects of these demographic variables, though economics students tend to be less likely to invest with CEO A. As prior accounting research finds that perceived trustworthiness affects investment choices (e.g., Hewitt et al., 2020), we also test and control for this factor (*ΔCEO_Trustworthy*) in all regressions (for a discussion of these results, see Section 4.3).

Column (1) shows that participants react to differences in claimed future returns between the two CEOs such that they prefer to invest with CEO A when he claimed higher future returns than CEO B and vice versa. The marginal effects imply that an increase of the returns difference in favor of CEO A by 10 percentage points (the difference between the choice situations) increases the probability of investing with that CEO by about 5%. Column (2) shows the positive direct effect for the second main variable of interest, *ΔCEO_PVHon*. Thus, participants tend to invest with the CEO whom they perceive to be more committed to honesty. In Column (3), we include both main predictors in a single model, and both positive direct effects remain significant. A one standard deviation increase in CEO A's perceived commitment to honesty relative to CEO B's perceived commitment to honesty has about the same quantitative effect on the attractiveness of CEO A as an increase in claimed returns of CEO A relative to CEO B of 27 percentage points (=0.742/0.028).

In Column (4) we test the interaction between the two main variables of interest. H2 holds that as a CEO's perceived commitment to honesty increases relative to his peer, the relative difference in their claimed returns plays a diminishing role in motivating investor choices. The significant negative interaction term supports H2. The more participants perceive CEO A to be more committed to honesty than CEO B, the smaller the effect of claimed future returns on

investments in CEO A. A one standard deviation increase in *ΔCEO_PVHon* reduces the relevance of returns of CEO A relative to CEO B by about 40% (0.011/0.027).

-Insert Table 2 here-

Overall, we derive three main conclusions from the results of Experiment 1. First, the CEO who did not engage in earnings management in the past is perceived to be more committed to honesty than the CEO who managed earnings. Second, participants' investment choices depend upon differences between the two CEOs not only in their claimed future returns but also in their perceived commitment to honesty. Finally, holding another CEO's claimed future returns fixed, participants become less sensitive to the claimed future returns of a CEO the more they perceive this CEO to treat honesty as a protected value relative to the other. Next, we turn to how different types of investors use the honesty perception in their investment choices.

4.2 Results for Experiment 2

4.2.1 Descriptive Statistics and Correlations between the Main Variables of Interest

Table 3 presents the descriptive statistics for the variables of interest, distinguishing between proself and prosocial participants.[23] As can be seen, both subsamples share a preference to invest with CEO A, though again, like in Experiment 1, far from all participants invested with CEO A.

Importantly, and as expected, proselfs and prosocials do not differ significantly in how they perceive CEO A relative to CEO B regarding his commitment to honesty. Even though proselfs and prosocials differ little in their perception of the two CEOs, we will see below that these perceptions are weighted differently in the investment decisions of these two groups.

-Insert Tables 3 and 4 here-

Table 3 also shows that proselfs and prosocials differ somewhat in the extent to which they treat honesty as a protected value. The cross-tabulation in Table 4 reveals that among the proselfs

[23] In prior work, the fraction of individuals classified as prosocial is about 60-65% (see Van Dijk et al. (2004) for a review). Our data are consistent with these prior findings. See Table A1 in Appendix A.2 for the full descriptive statistics. Table A4 provides separate correlation statistics for the pro-self and prosocial participants.

(prosocials), the majority of individuals have below-median (above-median) *Investor_PVHon.* Importantly, however, there are also many participants who are proselfs (prosocials) but have above-median (below-median) *Investor_PVHon*. Consequently, *Investor_SVO* and *Investor_PVHon* are far from perfectly correlated (r = .18) indicating that both scales are likely to refer to distinct personal traits.

4.2.2 Investment Decisions: The Investors' Motives Hypothesis

While proself and prosocial participants hardly differ regarding their perception of the CEO's commitment to honesty, H3 proposes that perceptions of the CEO's honesty bear a different meaning for the two groups, and therefore can affect their behavior through different channels. We again estimate logit regression models, where the investment in CEO A is the dependent variable. Table 5 summarizes regressions for the proselfs (Columns 1 – 3), for the prosocials (Columns 4 – 6), and two regressions for the full sample (Columns 7 and 8). All regressions include the participants' age, gender, and academic major, but the coefficients are not shown to conserve space. As in Experiment 1, we also control for the difference in the CEOs' perceived trustworthiness.

What is striking about Table 5 is that in Columns (1) to (3), the variables including *ΔReturn* are all significant, indicating that economic considerations play an independent role and interact with non-financial motives, which suggests that proselfs use non-financial motives to analyze how likely the claimed returns will materialize. By contrast, in Columns (4) to (6), the variables including *ΔReturn* are all insignificant, showing that for prosocials economic considerations play much less of a role, both directly and in conjunction with ethical considerations.

Results for proselfs. Studying the results in more detail, we see that Column (1) echoes the findings we obtained in Experiment 1: A positive direct effect for *ΔReturn* indicates that proselfs are indeed sensitive towards differences in claimed future returns between the CEOs. Proselfs are

also sensitive towards differences in $PV_{honesty}$ between the two CEOs, as shown by the significant direct effect for *ΔCEO_PVHon*.

Proselfs tend to invest more heavily with CEO A, the more they perceive the CEO to be committed to honesty relative to CEO B. Finally, we replicate the negative interaction term between *ΔCEO_PVHon* and *ΔReturn* as observed in Experiment 1. For proselfs, the positive main effect of claimed future returns on investment behavior is strengthened when they perceive this CEO as more committed to honesty but is weakened when they perceive the CEO as deceptive. Column (1) also shows that we do not find a significant main effect of *Investor_PVHon* on investment in CEO A for proselfs. Thus, the investment choices made by these participants do not depend directly on their own preferences for truthfulness.

In Column (2) we include the interaction between *Investor_PVHon* and *ΔReturn* in the regression. The interaction term *ΔCEO_PVHon* and *ΔReturn* remains significant. The interaction between *Investor_PVHon* and *ΔReturn* enters negatively, suggesting that even proselfs become less sensitive to claimed future returns the more they treat honesty as a protected value. It is conceivable that these high *Investor_PVHon* participants wish to signal (perhaps to themselves, as in self-signalling models such as Bénabou and Tirole (2004, 2006)) that they uphold their protected values for honesty in contrast to other less ethically inclined investors. Column (3) shows that the participants' protected values and those attributed to the CEOs do not interact.

In sum, these results support what H3 suggests for proselfs, namely, that they become less return sensitive the more they perceive a CEO to treat honesty as a protected value compared to the other.

-Insert Table 5 here-

Results for prosocials. Columns (4) to (6) turn to the prosocials, for whom H3 predicts that returns play a much less important role while moral motives matter directly. The positive,

but small and statistically insignificant main effect for *ΔReturn* suggests, as expected, that prosocials are generally only weakly sensitive towards differences in predicted returns. However, as predicted by H3, non-financial motives matter. First, column (4) shows a significant main effect for *Investor_PVHon*, *i*.e., prosocials tend to invest more in the non-earnings management CEO the more they themselves value honesty. Second, the main effect for *ΔCEO_PVHon* in Column (4) of Table 5 means that prosocials tend to invest more heavily with CEO A, the more they perceive this CEO to be committed to honesty relative to CEO B.[24]

The importance of moral factors tends to come in a specific form: The results in Columns (5) and (6) show that for prosocials assortative matching plays a role. We observe a significantly positive interaction between *Investor_PVHon* and *ΔCEO_PVHon* on investments with CEO A for prosocials. Thus, prosocials follow a simple heuristic of investing with CEO A the more their protected values overlap with the values attributed to this CEO.

Hence, while *ΔCEO_PVHon* matters for the proselfs' assessment of returns, for the prosocials it moderates the impact of their values. One way to interpret this outcome is that the tendency of those prosocials with high *Investor_PVHon* to invest with CEO A might partially stem from prosocially oriented participants wanting to "punish" the dishonest CEO by withholding funds from him.[25] An additional interpretation of the findings is that prosocials use the perceived managerial honesty as a cue of who is more congruent with their own (either high or low) commitment to honesty (and thereby to be preferred as a cooperative partner).

[24] We do not have a compelling explanation for why this coefficient is smaller than for the proselfs.

[25] In public good games, immoral behaviors such as acts of free riding are punished and individuals are willing to sacrifice own benefit to punish others (e.g., Hirshleifer and Rasmusen (1989)). They do this even without any future interactions with the individual they punish, that is, even when they are unlikely to gain individual benefit in form of increased cooperation from that person in the future (Fehr and Gächter 2002). Our data suggest that some investors may similarly punish CEOs they perceive as unethical by withholding funds with them. Importantly, we show how these punitive sentiments depend upon the investors' traits and values. Steinel and De Dreu (2004) discuss how SVO affects individuals' tendency to moralistic punishment, though they only study how SVO affects reactions to others' competitive or cooperative tendencies, not to perceived differences in honesty. We note that with our design, it is not possible to determine whether an investment in A is an active choice *for* A, or a choice *against* B. While this is a conceptually interesting distinction, it may not be of first order concern from the perspective of managers seeking to attract capital.

Differences in claimed future returns do not affect this behavioral pattern; we do not find any evidence that *Investor_PVHon, ΔCEO_PVHon,* and *ΔReturn* interact.

Overall, these results also support what H3 suggests for prosocials, namely, that they are insensitive to returns, but base their investment judgments directly on their and the CEOs' moral motives.

Results for both groups. Columns (7) and (8) present the results for both proself and prosocial participants in a single regression. (Because regressions with many interaction terms can be difficult to interpret, we proceed in two steps.) We include *Investor_SVO* as a dichotomous variable (proself = 0, prosocial = 1) in the regression. The effects of the main variables of interest, *ΔReturn*, *ΔCEO_PVHon,* and their interaction, are all significant and echo the effects observed in Experiment 1. These effects are thus essentially driven by the proselfs. We also find a direct effect of *Investor_PVHon* on investment choices in Column (7). However, as seen in the interaction of *Investor_SVO* and *Investor_PVHon* in Column (8), this effect is driven by the prosocials. Finally, the positive and significant three-way interaction between *Investor_SVO*, *ΔReturn*, and *ΔCEO_PVHon* underpins the main finding for Experiment 2. Proselfs trade off return differences with differences in perceived CEO commitment to honesty.

Figures 3 and 4 illustrate these results. Figure 3 Panel A displays proselfs' choices in favor of CEO A as a function of *ΔCEO_PVHon* for when CEO A claims higher returns than CEO B and vice versa. As in Figure 1 for Experiment 1, the two lines converge as CEO A is increasingly perceived as treating honesty as a protected value. That is, proselfs become less sensitive towards returns the more they perceive a CEO to treat honesty as a protected value compared to the other. Figure 4 Panel A shows that the more a proself participant is committed to honesty, the smaller the effect of return differences on investment choices. As seen in the regressions, however, *Investor_PVHon* alone does not predict these investors' investments.

For the prosocials, we find a completely different picture regarding the influence of the main variables of interest on investment behavior. Panel B in Figure 3 demonstrates that differences in returns between the two CEOs do not noticeably affect the prosocials' investment choices. The figure depicts the small, but significant, main effect of *ΔCEO_PVHon* on investment choices. However, Panel B in Figure 4 shows that prosocials invest more heavily with CEO A the more they themselves are committed to honesty, whereas they prefer to invest with CEO B when they themselves have a low *Investor_PVHon.*

-Insert Figures 3 and 4 here-

To sum up, the results of Experiment 2 support H3. They suggest that both proself and prosocial investors are sensitive towards CEO commitment to honesty, but for different reasons. Proself investors aim to maximize their economic benefit, by investing with the CEO who claims higher returns relative to the other. They are therefore sensitive towards CEO commitment to honesty because this informs them about the likelihood that the promised returns will effectively be delivered by the CEO. By contrast, prosocial investors derive utility from following non-monetary, moral motives directly, investing with the non-earnings management CEO when they themselves have a strong commitment to honesty. These results expand the "price of sin" intuition in Hong and Kacperczyk (2009): We find that even for the proselfs, managerial honesty is important – not as a goal in itself, but because it allows them to reach their goal of maximizing returns with limited (CEO deception) risk.

4.3 Robustness Analyses for Experiment 1 and Experiment 2

In Appendix A.3, we discuss several further issues, including the potential role of demand effects. We also summarize several additional analyses. These analyses show – amongst other findings - that (i) our results hold controlling for additional variables concerning the perception of the CEO (e.g., perceived trustworthiness and perceived willingness to make financial sacrifices)

and the interaction of these variables with *ΔReturn* (see Table A3), (ii) the results for Experiment 2 continue to hold for a median split for *Investor_SVO*, which allows to use the full sample of 150 participants (see Table A5), and (iii) our results hold when controlling for the financial savviness of our participants (see Table A6).

5 Concluding Remarks

We conduct two laboratory experiments to shed light on the honesty inference drawn from earnings management and on how investor perception of managerial honesty as well as investors' social and moral characteristics affect their investment choices. We find that investors, on average, perceive a CEO to be more committed to honesty when he/she has previously resisted engaging in earnings management at a personal cost. Perceived managerial honesty in turn matters for investment choices, attracting several investor clienteles: Prosocial investors are more likely to invest with the CEO who did not manage earnings when they have high protected values for honesty and when they attribute strong protected values for honesty to the CEO. Proself investors invest with that CEO because they value managerial honesty as a signal of the credibility of the CEOs' claimed future returns. While prior research has focused on investor reactions when managers were involved in *illegal* activities (Dechow et al. 1996; Karpoff et al. 2008; Dyck et al. 2010; Fotak et al. 2017; Cline et al. 2018), the key feature of our analysis is that we focus on a corporate practice that is legal, but seen as ethically problematic by some investors.

Understanding the role of investor reaction to earnings management is important, as even initially legal behavior can lead managers towards fraud. For example, legal earnings management can lead managers down a slippery slope towards accounting fraud (Chu et al. 2019). Prominent attempts to prevent misconduct have included calls to change managerial compensation, and to strengthen board and auditor independence. Some interventions have met

with success. For example, public oversight of accountants has induced stronger financial reporting credibility (Gipper et al. 2019). Frequently, however, regulatory attempts have met with mixed success (Hail et al. 2018), amongst other reasons due to incomplete enforcement (Christensen et al. 2013, 2016). Our result that broad clienteles of investors, though for different reasons, elect to invest into firms managed by CEOs perceived as honest, suggests that market forces may after all help curb unethical managerial behavior.

Importantly, our findings also extend a developing stream of research highlighting the negative effects of earnings management on investors' willingness to invest. Previous research found that earnings management reduces trust in managers' reporting decisions. This reduction in trust also affects investment decisions (Hewitt et al. 2020). We find similar results concerning the role of trust, but also develop this idea by showing that earnings management signals CEOs' moral values to investors. Furthermore, we add to this research by showing that investors differ in how they interpret and use this information. We observe an instrumental (for proself investors) vs. principled (for prosocial investors) interpretation of managerial dishonesty attribution.

This work suggests testable implications for future empirical studies as well as potential normative overall financial market and prudential implications. In addition to experimental work, further archival research can also be fruitfully conducted, exploring, for example, whether managerial honesty translates into a positive impact on the firms' ability to raise equity and debt, to benefit from a liquid secondary security trading activity, and ultimately from a lower cost of capital. The key novel point implied by the present paper is that resistance against economic incentives for misbehavior is indicative of a strong commitment to good behavior. In real-world data, incentives of CEOs to misbehave vary (in the cross-section and over time), and this can be exploited. For example, to the extent that the market perceives discretionary accruals as an indication of the deception component of earnings management, *not* managing earnings this way

should particularly increase the credibility of a firm's future announcements when incentives to manage earnings would have been higher. Eugster and Wagner (2020) offer evidence in support of this prediction. More generally, if a CEO did *not* do something (legal but) potentially unethical even though he had an opportunity and incentives to do so, this suggests that the CEO is committed to integrity, and the market should respond positively to such resistance. This prediction is more specific than just testing whether the market reacts negatively to, for example, the revelation of option backdating, or fraudulent activity.

Finally, our results have important implications for firms' investor relations. The insight that investors may infer managerial commitment towards honesty from past earnings management choices should be taken into account when attempting to position top management as exhibiting personal integrity. Moreover, all firms eventually show less strong financial results or have to claim lower returns than expected during market turmoils (as for example during the recent one associated with the Coronavirus crisis). In such situations, it would be interesting to investigate whether having an honest CEO may induce investors to hold on to their investments, thus avoiding panic sales and a detrimental impact on the firm's resilience and stability.

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Figure 1: Expected behavior in Experiment 1

This graph plots the predicted share of investors' choices for CEO A depending on the differences in estimated probabilities of delivery of the announced returns, Δp, which are empirically proxied by the differences in perceived commitment to honesty between CEO A and CEO B (*ΔCEO_PVHon*). It does so for the situation where $\Delta R > 0$, that is, where CEO A announces higher future returns than CEO B (solid line), and for the opposite case (dashed line).

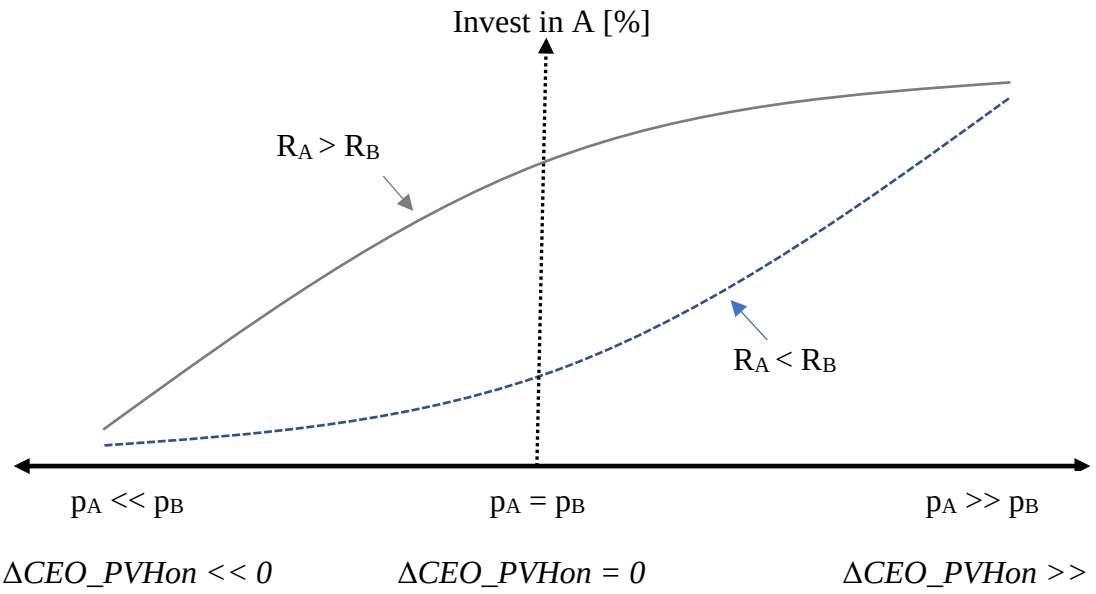

Figure 2: Choices in favor of CEO A and Perceived CEO Protected Value for Honesty

This graph plots the share of investors' choices for CEO A depending on the differences in perceived commitment to honesty between CEO A and CEO B (*ΔCEO_PVHon*) in Experiment 1. Participants made in total four investment choices between the company managed by CEO A and the company managed by CEO B. Two choices were made with CEO A claiming higher future returns than CEO B (solid line) and two decisions with CEO A claiming lower future returns than CEO B (dashed line). We categorize investors in terms of *ΔCEO_PVHon* terciles.

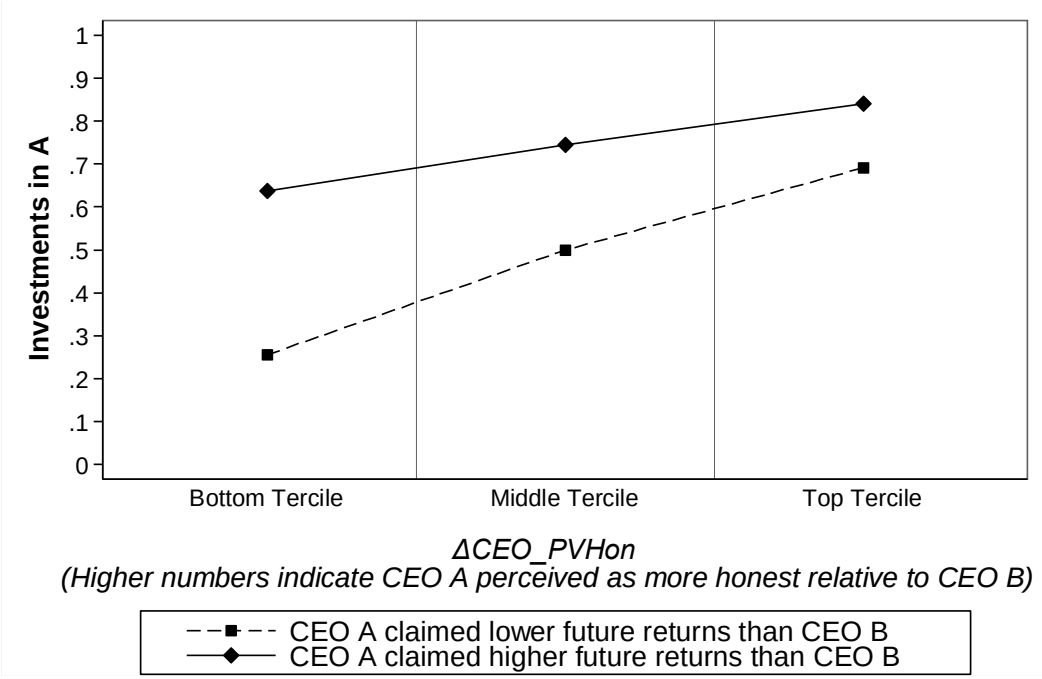

Figure 3: Choices in favor of CEO A and Perceived CEO Protected Values for Honesty

These graphs plot the share of investors' choices for CEO A depending on the differences in perceived commitment to honesty between CEO A and CEO B (*ΔCEO_PVHon*) separately for proself (Panel A) and prosocial investors (Panel B). Participants made in total four investment choices between the company managed by CEO A and the company managed by CEO B. In two choice situations, CEO A claimed higher future returns than CEO B (solid line), and in two choice situations CEO A claimed lower future returns than CEO B (dashed line). We categorize investors into *ΔCEO_PVHon* terciles.

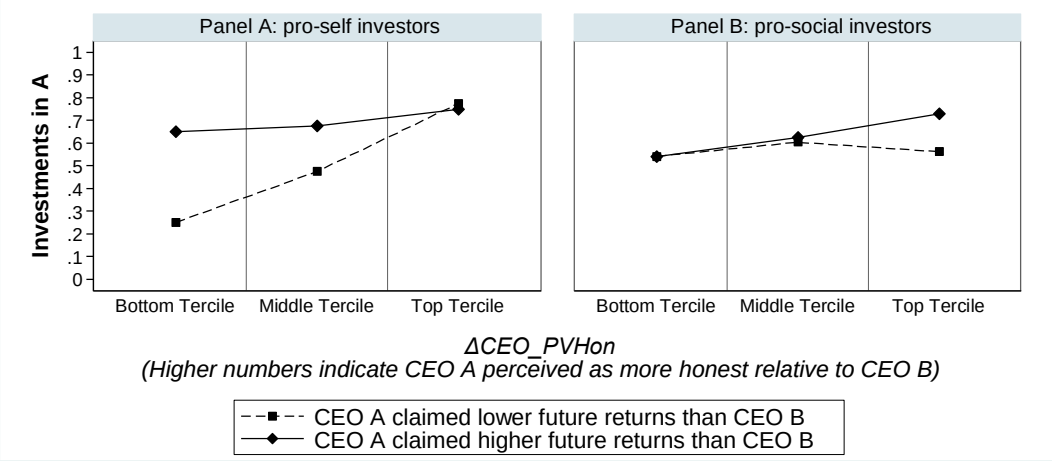

Figure 4: Choices in favor of CEO A and Investor Protected Values for Honesty

These graphs plot the share of investors' choices for CEO A depending on investors' own commitment to honesty (*Investor_PVHon*) separately for proself (Panel A) and prosocial investors (Panel B). Participants made in total four investment choices between the company managed by CEO A and the company managed by CEO B. In two choice situations, CEO A claimed higher future returns than CEO B (solid line), and in two choice situations CEO A claimed lower future returns than CEO B (dashed line). We categorize investors into *Investor_PVHon* terciles.

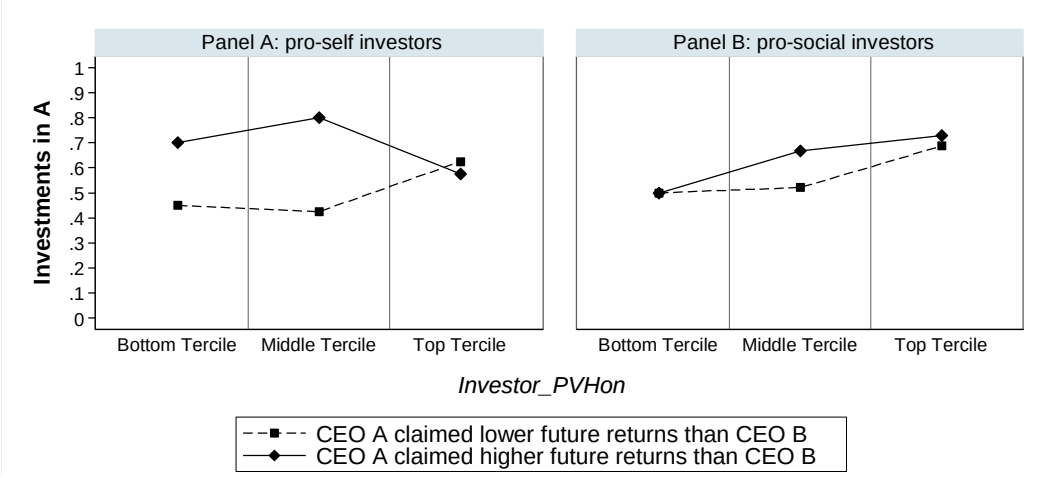

Table 1: Differences in perceived CEO characteristics

Panel A of this table presents means and standard deviations (SD) of perceived commitment to honesty ($PV_{honesty}$) of CEO A and CEO B (measured on a 7-point scale) as well as a t-test for differences (N= 141). *** indicates significance at the 1% level. Panel B presents differences in CEO perception between the two CEOs. *ΔCEO_PVHon* is the difference in perceived commitment to honesty between CEO A and CEO B (Perceived $PV_{honesty}$ CEO A - Perceived $PV_{honesty}$ CEO B). In the regressions, we standardize *ΔCEO_PVHon* to mean zero and standard deviation of one. Panel C depicts summary statistics for the perceived CEO characteristics in the separate survey described in Section 2.2.2 (N = 112) including *perceived earnings management* (on a 6-point scale, where for this presentation we group "only CEO A" with "CEO A more than CEO B" and "only CEO B" with "CEO B more than CEO A", respectively), *perceived CEO honesty*, *perceived CEO competence*, and the *perceived CEO risk tolerance* (on 4-point scales).

Panel A: Perceived CEO honesty in Experiment 1

	Mean CEO A	SD CEO A	Mean CEO B	SD CEO B	t-test for mean differences
$PV_{honesty}$	4.46	1.31	3.31	1.03	$t(140) = 6.53$***

Panel B: Differences in perceived CEO honesty in Experiment 1

	Mean	%Positive	SD	Min	Max
ΔCEO_PVHon	1.15	75%	2.08	-3.44	6.00

Panel C: Differences in perceived CEO actions and characteristics in the separate survey

	CEO A more than CEO B	CEO B more than CEO A	No difference	Cannot answer
Perceived earnings management	26%	60%	3%	11%
Perceived CEO honesty	40%	11%	29%	20%
Perceived CEO competence	9%	6%	50%	35%
Perceived CEO risk tolerance	13%	57%	9%	21%

Table 2: Investment choices and Perceived CEO Protected Value for Honesty

This table presents the results of logit regressions for Experiment 1. The dependent variable is *Invest in A*, which is 1 when a participant chose to invest in the company managed by CEO A, and 0 otherwise. Participants made four such choices each. *ΔReturn* is the difference in claimed returns between CEO A and CEO B. The perceived commitment to honesty of each CEO was measured on a 9 item Likert scale and the difference in perceived commitment (*ΔCEO_PVHon*) was used as the predictor in the regression. Trustworthiness was measured on a single item Likert scale. $\Delta CEO\_Trustworthy^{\perp}$ was orthogonalized relative to *ΔCEO_PVHon*. P-values, based on standard errors clustered at the individual level, are reported in parentheses. *** 1% significance; ** 5% significance, * 10% significance.

	(1)	(2)	(3)	(4)
ΔReturn	0.025***		0.028***	0.027***
	(0.00)		(0.00)	(0.00)
ΔCEO_PVHon		0.686***	0.742***	0.737***
		(0.00)	(0.00)	(0.00)
*ΔReturn * ΔCEO_PVHon*				-0.011*
				(0.08)
$\Delta CEO\_Trustworthy^{\perp}$	0.468***	0.444***	0.481***	0.504***
	(0.00)	(0.00)	(0.00)	(0.00)
Age	0.030	0.003	0.004	0.005
	(0.17)	(0.89)	(0.89)	(0.84)
Female	0.053	0.182	0.197	0.191
	(0.79)	(0.33)	(0.33)	(0.35)
Economics	-0.202	-0.162	-0.176	-0.178
	(0.33)	(0.39)	(0.39)	(0.39)
Constant	-0.094	0.458	0.498	0.437
	(0.86)	(0.44)	(0.44)	(0.49)
Observations	564	564	564	564
Pseudo R-squared	0.0839	0.100	0.156	0.162
Pseudo Log Likelihood	-345.1	-339	-317.9	-315.5
Base Log Likelihood	-376.7	-376.7	-376.7	-376.7

Table 3: Summary Statistics for Experiment 2

The table presents descriptive statistics for Experiment 2. *Invest in A* is the fraction of investor choices for the company managed by CEO A. *ΔCEO_PVHon* is the difference in perceived commitment to honesty between CEO A and CEO B (*CEOA_PVHon* - *CEOB_PVHon*). *ΔCEO_PVHon* and *Investor_PVHon* are standardized. *Investor_PVHon* is the investor's own commitment to honesty. We categorize participants as prosocial (N =72) (proself, N = 60) when they chose the cooperative (self-maximizing) alternative in six out of nine social value orientation (*Investor_SVO*) items. *Investor_SVO* captures investors' preferences regarding how to allocate resources between them and another person. For details, see the text. t-statistics are for tests of differences in the means between proself and prosocial investors. *** 1% significance; ** 5% significance, * 10% significance.

Group:	**Proselfs**		**Prosocials**		
	Mean	SD	Mean	SD	t-test for differences in means
Invest in A	0.60	0.49	0.60	0.49	$t(526) = -0.11$
ΔCEO_PVHon	-0.04	0.92	0.17	0.97	$t(130) = -1.27$
CEOA_PVHon	4.52	1.1	4.70	1.18	$t(130) = -0.93$
CEOB_PVHon	3.36	1.02	3.10	1.12	$t(130) = 1.34$
Investor_PVHon	-0.13	1.07	0.19	0.86	$t(130) = -1.94$*
Investor_PVHon (unstandardized)	5.16	0.94	5.45	0.76	$t(130) = -1.94$*

Table 4: Cross-tabulation of participants according to *Investor_PVHon* and *Investor_SVO*

The table shows the number of participants in each of four combinations of traits. We perform a median split on *Investor_PVHon*. We categorized participants as prosocial (N = 72) when they chose the cooperative alternative in six out of the nine *Investor_SVO* items. They are categorized as proself (N = 60) when they chose the self-maximizing alternative in six out of the nine items. Data are from Experiment 2.

	Investor_SVO		
Investor_PVHon	**Proself**	**Prosocial**	Total
Below median	34	29	63
Above median	26	43	69
Total	60	72	132

Table 5: Investment choices and Perceived CEO Protected Values for Honesty depending on investor Social Value Orientation

This table presents the results of logit regressions for Experiment 2. The dependent variable is *Invest in A*, which is 1 when a participant chooses to invest in the company managed by CEO A, and 0 otherwise. Participants made four such choices each. The table shows two regressions for each investor subsample, i.e. investors with a proself and investors with a prosocial orientation. All variables were measured as in Experiment 1, except the *ΔCEO_Trustworthy* measure, which is a two-item measure (trustworthiness and credibility) in Experiment 2 (see methods section). *Investor_PVHon* is the investors' commitment to honesty. *ΔCEO_Trustworthy*$^{\perp}$ was orthogonalized relative to *ΔCEO_PVHon*. *Investor_SVO* in column 7 is a dichotomous variable with proself = 0 and prosocial = 1. The coefficients on the demographic variables (age, gender, program of studies) are not shown. P-values, based on standard errors clustered at the individual level, are reported in parentheses. *** 1% significance; ** 5% significance, * 10% significance.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
***Investor*_SVO**	**Proself value orientation**			**Prosocial value orientation**			**Full sample**	**Full sample**
ΔReturn	0.020**	0.019**	0.019**	0.006	0.007	0.007	0.019**	0.019**
	(0.02)	(0.04)	(0.04)	(0.41)	(0.40)	(0.39)	(0.04)	(0.04)
ΔCEO_PVHon	0.713***	0.720***	0.711***	0.322***	0.305***	0.305***	0.686***	0.724***
	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)
*ΔReturn * ΔCEO_PVHon*	-0.019*	-0.018*	-0.021**	0.003	0.004	0.004	-0.019*	-0.018*
	(0.07)	(0.09)	(0.05)	(0.67)	(0.64)	(0.62)	(0.07)	(0.08)
Investor_PVHon	-0.079	-0.080	-0.072	0.553***	0.582***	0.581***	0.235**	-0.034
	(0.60)	(0.57)	(0.60)	(0.00)	(0.00)	(0.00)	(0.03)	(0.79)
*Investor_PVHon * ΔCEO_PVHon*		-0.040	-0.060		0.170*	0.168*	0.094	-0.035
		(0.78)	(0.67)		(0.06)	(0.08)	(0.25)	(0.81)
*Investor_PVHon * ΔReturn*		-0.018**	-0.017*		-0.001	-0.001	-0.010	-0.018**
		(0.04)	(0.05)		(0.95)	(0.90)	(0.14)	(0.05)
*Investor_PVHon * ΔReturn *ΔCEO_PVHon*			0.012			-0.002	0.002	0.002
			(0.25)			(0.76)	(0.82)	(0.73)
Investor_SVO							-0.190	-0.227
							(0.30)	(0.20)
*Investor_SVO * ΔCEO_PVHon*							-0.346*	-0.418**
							(0.07)	(0.02)
*Investor_SVO * ΔReturn*							-0.011	-0.013
							(0.35)	(0.30)
*Investor_SVO*ΔReturn* ΔCEO_PVHon*							0.023*	0.021*
							(0.08)	(0.09)
*Investor_PVHon * Investor_SVO*								0.586***
								(0.00)
*Investor_PVHon * Investor_SVO * ΔReturn*								0.018
								(0.18)
*Investor_PVHon * Investor_SVO*ΔCEO_PVHon*								0.212
								(0.22)
ΔCEO_Trustworthy$^{\perp}$	0.313**	0.324**	0.337**	0.333***	0.351***	0.351***	0.294***	0.348***
	(0.04)	(0.04)	(0.04)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.271	0.296	0.385	1.270**	1.210**	1.210**	1.333***	1.176**
	(0.83)	(0.81)	(0.75)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Observations	240	240	240	288	288	288	528	528
Pseudo R-squared	0.135	0.157	0.163	0.079	0.083	0.084	0.084	0.084
Pseudo Log Likelihood	-140.1	-136.5	-135.6	-178.4	-177.6	-177.6	-320.1	-314.8
Base Log Likelihood	-161.9	-161.9	-161.9	-193.7	-193.7	-193.7	-355.7	-355.7

Supplementary Appendix (Online Material)

A.1 Details on Updating

The investor wants to infer the probability that the CEO's promised returns in the future come through. The signal the investor observes is whether the CEO has managed earnings or not. While the observation of earnings management is a fact (and not a random variable per se), behind that realization is some decision-making process by the CEO, which links the outcome to manage earnings or not to the intrinsic tendency of the CEO to report the truth. Gibson, Tanner, and Wagner (2013) show that individuals with stronger protected values resist the monetary temptation to misreport earnings. If an investor believes that past honest reporting is an indication of a CEO to always announce the truth, he will also assign a higher probability to the CEO's future announced returns to come through.

Specifically, the investor is interested in Pr (CEO A delivers | A has not managed earnings). Let d = 1 denote "CEO delivers" and let EM = 0 denote "CEO has not managed earnings". p^0 denotes the prior probability that the CEO delivers.

By Bayes' rule, the posterior thus is

$$p^A = \xi(d = 1|\mathrm{EM} = 0) = \frac{Pr(EM = 0|\ \mathrm{d} = 1) * p^0}{Pr(EM = 0|\ \mathrm{d} = 1) * p^0 + \Pr(EM = 0|\ \mathrm{d} = 0) * (1 - p^0)}$$

In the extreme, if it were the case that the CEO who delivers what he announces also does not engage in earnings management, then observing no earnings management drives the posterior to 1. In a less extreme version, suppose that the investor estimates a choice model of the CEO. He infers high honesty from "no earnings management" if he thinks that "no earnings management" was less likely to have been random or due to other reasons (like low CEO competence). Overall, it seems plausible that $Pr(EM = 0|\ \mathrm{d} = 1)$ is increasing in *CEOA_PVHon*. Because $\xi(d = 1|\mathrm{EM} = 0)$ is increasing in $Pr(EM = 0|\ \mathrm{d} = 1)$, this *CEOA_PVHon* also is an estimate of (or is positively correlated with) $p^H = \xi(d = 1|\mathrm{EM} = 0)$. Similarly, *CEOB_PVHon* is an inverse estimate of (or is negatively correlated with) $p^B = \xi(d = 1|\mathrm{EM} = 1)$. Combining, Δ*CEO_PVHon* provides an estimate of (or is positively correlated with) $\Delta p = p^A - p^B$.

A.2 Additional Analyses

Table A1: Descriptive statistics for all variables in Experiment 1 and Experiment 2

This table presents means, standard deviations (SD), quartiles (P25, Median, P75), minimum values (Min), maximum values (Max) and the Range for all variables in Experiment 1 (N=141), the separate survey (N=112), and Experiment 2 (N=150, where the main analysis uses the 132 participants who can be classified as proself or prosocial according to the main method, see the main text). Experiment 1: *CEOA_Trusworthy* (*CEOB_Trustworthy*) is perceived trustworthiness of CEO A (CEO B) measured on a single 5-point scale. *CEOA_LTO* (*CEOB_LTO*) is perceived long-term orientation of CEO A (CEO B) measured on a single 5-point scale. *CEOA_Sacrifice* (*CEOB_Sacrifice*) is perceived willingness to make financial sacrifices by CEO A (CEO B) also measured on a single 5-point scale. *Invest in A* is the dependent variable in Experiment 1, which is 1 when a participant chose to invest in the company managed by CEO A, and 0 otherwise. *CEOA_PVHon* (*CEOB_PVHon*) is perceived commitment to honesty of CEO A (CEO B) measured on a 9-items 7-point scale. Experiment 1- separate survey: *Perceived earnings management* is perceived CEO engagement in earnings management measured on a single 6-point scale. *Perceived CEO risk tolerance* is the perceived difference in the two CEOs' risk tolerance. *Perceived CEO honesty* is the perceived difference in the two CEOs honesty. *Perceived CEO competence* is the perceived difference in the two CEOs' competence. All variables are measured on a single 4-point scale. Experiment 2: *Stocks* polls whether participants own stocks or not. *Financial_News* polls how often participants inform themselves about economic events measured on a single 5-item scale. *Investor_PVHon* is participants commitment to honesty measured on a 9-item 7-point scale. *Investor_SVO* captures investors' social value orientation, i.e. their preferences regarding how to allocate resources between them and another person. We classify investors as proself (*Investor_SVO* = 0) or prosocial (*Investor_SVO* = 1) when they chose the cooperative (self-maximizing) alternative in six out of nine social value orientation (*Investor_SVO*) items. All remaining items in Experiment 2 are measured exactly as in Experiment 1 with one exception. *CEOA_Trustworthy (CEOB_Trustworthy)* is measured on a 2-items 5-item scale. The exact wording of all items is displayed in the experimental instructions in the Appendix A.4.

	Mean	**SD**	**P25**	**Median**	**P75**	**Min**	**Max**	**Range**
Experiment 1								
Female	*0.42*	*0.50*	*0*	*0*	*1*	*0*	*1*	*nominal*
Age	*23.40*	*3.42*	*22*	*23*	*24*	*19*	*51*	
Economics	*0.63*	*0.48*	*0*	*1*	*1*	*0*	*1*	*nominal*
CEOA_Trustworthy	*3.79*	*0.99*	*3*	*4*	*4*	*1*	*5*	*1-5*
CEOB_Trustworthy	*2.78*	*0.98*	*2*	*3*	*3*	*1*	*5*	*1-5*
CEOA_LTO	*3.94*	*1.06*	*3*	*4*	*5*	*1*	*5*	*1-5*
CEOB_LTO	*2.43*	*1.01*	*2*	*2*	*3*	*1*	*5*	*1-5*
CEOA_Sacrifice	*3.58*	*1.17*	*3*	*4*	*4*	*1*	*5*	*1-5*
CEOB_Sacrifice	*2.50*	*1.10*	*2*	*2*	*3*	*1*	*5*	*1-5*
Invest in A	*0.62*	*0.49*	*0*	*1*	*1*	*0*	*1*	*nominal*
CEOA_PVHon	*4.46*	*1.31*	*3.44*	*4.56*	*5.44*	*1*	*7*	*1-7*
CEOB_PVHon	*3.31*	*1.03*	*2.56*	*3.22*	*4*	*1*	*6.22*	*1-7*
Experiment 1 - separate survey								
Female	*0.30*	*0.48*	*0*	*0*	*1*	*0*	*1*	*nominal*
Age	*22.21*	*4.51*	*20*	*21*	*22*	*18*	*44*	
Perceived earnings management	*3.46*	*1.38*	*2*	*4*	*4*	*1*	*6*	*1-6*
Perceived CEO risk tolerance	*2.37*	*0.96*	*2*	*2*	*3*	*1*	*4*	*1-4*
Perceived CEO honesty	*2.29*	*1.19*	*1*	*2*	*3*	*1*	*4*	*1-4*
Perceived CEO competence	*3.11*	*0.87*	*3*	*3*	*4*	*1*	*4*	*1-4*

Experiment 2								
Female	*0.68*	*0.47*	*0*	*1*	*1*	*0*	*1*	*nominal*
Age	*22.17*	*4.93*	*20*	*21*	*23*	*19*	*59*	
Economics	*0.37*	*0.48*	*0*	*0*	*1*	*0*	*1*	*nominal*
Stocks	*0.29*	*0.46*	*0*	*0*	*1*	*0*	*1*	*nominal*
Financial_News	*3.22*	*1.27*	*2*	*3*	*4*	*1*	*5*	*1-5*
Investor_PVHon	*5.28*	*0.88*	*4.67*	*5.39*	*5.89*	*1.89*	*7.00*	*1-7*
Investor_SVO	*0.55*	*0.50*	*0*	*1*	*1*	*0*	*1*	*nominal*
CEOA_Trustworthy	*3.60*	*0.87*	*3*	*4*	*4*	*1*	*5*	*1-5*
CEOB_Trustworthy	*2.92*	*0.96*	*2*	*3*	*3.5*	*1*	*5*	*1-5*
CEOA_LTO	*3.63*	*0.05*	*3*	*4*	*4*	*1*	*5*	*1-5*
CEOB_LTO	*2.61*	*1.16*	*2*	*2*	*3*	*1*	*5*	*1-5*
CEOA_Sacrifice	*3.57*	*1.03*	*3*	*4*	*4*	*1*	*5*	*1-5*
CEOB_Sacrifice	*2.49*	*1.09*	*2*	*2*	*3*	*1*	*5*	*1-5*
Invest in A	*0.59*	*0.49*	*0*	*1*	*1*	*0*	*1*	*nominal*
CEOA_PVHon	*4.51*	*1.20*	*3.67*	*4.67*	*5.44*	*1.67*	*7*	*1-7*
CEOB_PVHon	*3.27*	*1.13*	*2.44*	*3.11*	*4*	*1*	*6.33*	*1-7*

Table A2: Correlation matrix for Experiment 1

This table presents Spearman correlations above the diagonal and Pearson correlations below. Data are from Experiment 1. * indicates significance at the 5% level.

	Invest in A	***ΔReturn***	***ΔCEO_PVHon***	***ΔCEO_Trustworthy***	***Age***	***Female***	***Economics***
Invest in A	1.	0.25*	0.30*	0.34*	0.01	0.02	-0.07
ΔReturn	0.25*	1	0.00	0.00	0.00	0.00	0.00
ΔCEO_PVHon	0.29*	0.00	1	0.72*	0.12*	-0.03	-0.04
ΔCEO_Trustworthy	0.34*	0.00	0.76*	1	0.11*	-0.08*	-0.10*
Age	0.01	0.00	0.13*	-0.01	1	-0.10*	0.12*
Female	0.02	0.00	-0.06	-0.08*	0.12*	1	-0.34*
Economics	-0.07	0.00	-0.01	-0.09*	-0.03	-0.34*	1

Table A3: Investment choices and the interaction of CEO characteristics with claimed future returns

This table presents the results of logit regressions for Experiment 1. The dependent variable is *Invest in A*, which is 1 when a participant chooses to invest in the company managed by CEO A, and 0 otherwise. Participants made four such choices each. *ΔReturn* is the difference in claimed future returns between CEO A and CEO B. We test the interaction of differences in perceived CEO willingness to make financial sacrifices (*ΔSacrifice*) and differences in perceived CEO long-term orientation (*ΔLTO*) with differences in claimed future returns (*ΔReturn*). All other variables remain exactly as in Table 5. P-values, based on standard errors clustered at the individual level, are reported in parentheses. *** 1% significance; ** 5% significance, * 10% significance.

	(1)	(2)
ΔReturn	0.028***	0.028***
	(0.00)	(0.00)
ΔCEO_PVHon	0.726***	0.745***
	(0.00)	(0.00)
*ΔReturn * ΔCEO_PVHon*	-0.010*	-0.013**
	(0.10)	(0.04)
*ΔReturn * ΔCEO_Trustworthy*	0.004	0.003
	(0.39)	(0.55)
*ΔReturn*ΔSacrifice*		0.002
		(0.77)
*ΔReturn*ΔLTO*		0.007
		(0.31)
ΔSacrifice		0.003
		(0.97)
ΔLTO		-0.058
		(0.62)
ΔCEO_Trustworthy	0.512***	0.532***
	(0.00)	(0.00)
Age	0.005	0.008
	(0.83)	(0.77)
Female	0.192	0.192
	(0.35)	(0.36)
Economics	-0.176	-0.186
	(0.39)	(0.38)
Constant	0.444	0.399
	(0.48)	(0.54)
Observations	564	564
Pseudo R-squared	0.164	0.168
Pseudo Log Likelihood	-315.1	-313.5
Base Log Likelihood	-376.7	-376.7

Table A4: Correlation matrix for Experiment 2

The tables in Panel A and Panel B present the Spearman above the diagonal and the Pearson correlations below for the subsamples proself and prosocial investors separately. * indicate significance at the 5% level.

Panel A Investors with a proself value orientation

	Invest in A	*ΔReturn*	*ΔCEO_PVHon*	*ΔCEO_Trustworthy*	*Age*	*Female*	*Economics*	*Investor_ PVHon*
Invest in A	1.00	0.21*	0.29*	0.27*	-0.04	0.03	-0.05	0.03
ΔReturn	0.21*	1.00	0.00	0.00	0.00	0.00	0.00	0.00
ΔCEO_PVHon	0.29*	0.00	1.00	0.65*	-0.03	0.04	-0.11	0.13*
ΔCEO_Trustworthy	0.28*	0.00	0.65*	1.00	0.02	0.15*	-0.24*	0.28*
Age	0.01	0.00	0.04	0.09	1.00	-0.19*	0.20*	0.18*
Female	0.03	0.00	0.06	0.11	-0.11	1.00	-0.45*	0.16*
Economics	-0.05	0.00	-0.14*	-0.19*	0.15*	-0.45*	1.00	-0.22*
Investor_PVHon	0.05	0.00	0.11	0.30*	0.27*	0.21*	-0.24*	1.00

Panel B Investors with a prosocial value orientation

	Invest in A	*ΔReturn*	*ΔCEO_PVHon*	*ΔCEO_Trustworthy*	*Age*	*Female*	*Economics*	*Investor_ PVHon*
Invest in A	1.00	0.07	0.14*	0.22*	-0.07	-0.08	-0.09	0.19*
ΔReturn	0.07	1.00	0.00	0.00	0.00	0.00	0.00	0.00
ΔCEO_PVHon	0.16*	0.00	1.00	0.48*	-0.01	-0.14*	-0.24*	0.12
ΔCEO_Trustworthy	0.22*	0.00	0.51*	1.00	-0.02	-0.12*	-0.16*	0.06
Age	-0.04	0.00	0.09	0.06	1.00	-0.16*	0.19*	-0.07
Female	-0.08	0.00	-0.08	-0.10	-0.16*	1.00	-0.23*	0.15*
Economics	-0.09	0.00	-0.26*	-0.16*	0.04	-0.23*	1.00	-0.44*
Investor_PVHon	0.21*	0.00	0.22*	0.11	-0.03	0.18*	-0.42*	1.00

Table A5: Investment choices and Perceived CEO Protected Values for Honesty depending on investor Social Value Orientation (Median Split)

This table presents the results of logit regressions for Experiment 2. The dependent variable is *Invest in A*, which is 1 when a participant chooses to invest in the company managed by CEO A, and 0 otherwise. Participants made four such choices each. The table shows two regressions for each investor subsample. Participants are categorized as proself or prosocial based on a median split to overcome excluding participants using the traditional approach by van Lange et al. (1997). We counted the self-maximizing choices in the Investor_SVO task and performed a median split on this variable. Participants above the median were categorized as proself and participants below or on the median were categorized as prosocial. All other variables remain exactly as in Table 8 columns 1- 6. P-values, based on standard errors clustered at the individual level, are reported in parentheses. *** 1% significance; ** 5% significance, * 10% significance.

	(1)	(2)	(3)	(4)	(5)	(6)
Investor_SVO	**Proself value orientation**			**Prosocial value orientation**		
ΔReturn	0.016**	0.014*	0.014*	0.008	0.008	0.008
	(0.04)	(0.08)	(0.08)	(0.28)	(0.27)	(0.25)
ΔCEO_PVHon	0.656***	0.668***	0.672***	0.320***	0.314***	0.313***
	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)
*ΔReturn * ΔCEO_PVHon*	-0.013*	-0.011	-0.012	0.004	0.004	0.004
	(0.10)	(0.15)	(0.13)	(0.61)	(0.57)	(0.55)
Investor_PVHon	-0.085	-0.033	-0.034	0.504***	0.515***	0.514***
	(0.52)	(0.78)	(0.76)	(0.00)	(0.00)	(0.00)
*Investor_PVHon * ΔCEO_PVHon*		0.081	0.053		0.101	0.098
		(0.34)	(0.57)		(0.26)	(0.29)
*Investor_PVHon * ΔReturn*		-0.014*	-0.011		-0.003	-0.003
		(0.06)	(0.15)		(0.76)	(0.71)
*Investor_PVHon * ΔReturn* ΔCEO_PVHon*			0.008			-0.003
			(0.27)			(0.64)
ΔCEO_Trustworthy	0.291**	0.273*	0.280*	0.295***	0.308***	0.308***
	(0.04)	(0.07)	(0.06)	(0.00)	(0.00)	(0.00)
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.372	-0.354	-0.371	1.341**	1.311**	1.312**
	(0.55)	(0.56)	(0.54)	(0.01)	(0.01)	(0.01)
Observations	288	288	288	312	312	312
Pseudo R-squared	0.120	0.136	0.141	0.0807	0.0826	0.0834
Pseudo Log Likelihood	-172.5	-169.2	-168.3	-193.8	-193.4	-193.3
Base Log Likelihood	-195.9	-195.9	-195.9	-210.8	-210.8	-210.8

Table A6: Investment choices and Perceived CEO Protected Values for Honesty depending on investor Social Value Orientation controlling for Financial Savviness

This table presents the results of logit regressions for Experiment 2. The dependent variable is *Invest in A*, which is 1 when a participant chooses to invest in the company managed by CEO A, and 0 otherwise. Participants made four such choices each. The table shows two regressions for each investor subsample. We control for whether a participant has made stock investments or not (*Stocks*) and whether he or she regularly reads the financial news or not (*Financial_News*). These items serve as a proxy for participants' financial savviness. All other variables remain exactly as in Table 8 columns 1- 6. P-values, based on standard errors clustered at the individual level, are reported in parentheses. *** 1% significance; ** 5% significance, * 10% significance.

	(1)	(2)	(3)	(4)	(5)	(6)
Investor_SVO	**Proself value orientation**			**Prosocial value orientation**		
ΔReturn	0.020**	0.019**	0.019**	0.006	0.007	0.007
	(0.02)	(0.04)	(0.04)	(0.41)	(0.40)	(0.39)
ΔCEO_PVHon	0.711***	0.717***	0.706***	0.305**	0.286**	0.286**
	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)
ΔReturn *	-0.019*	-0.018*	-0.021*	0.003	0.004	0.004
ΔCEO_PVHon	(0.08)	(0.09)	(0.05)	(0.67)	(0.64)	(0.62)
Investor_PVHon	-0.087	-0.087	-0.079	0.552***	0.579***	0.577***
	(0.59)	(0.56)	(0.60)	(0.00)	(0.00)	(0.00)
Investor_PVHon *		-0.039	-0.059		0.166*	0.164*
ΔCEO_PVHon		(0.79)	(0.68)		(0.07)	(0.09)
Investor_PVHon *		-0.018**	-0.017*		-0.001	-0.001
ΔReturn		(0.04)	(0.05)		(0.94)	(0.90)
Investor_PVHon *			0.012			-0.002
ΔReturn * ΔCEO_PVHon*			(0.25)			(0.75)
ΔCEO_Trustworthy	0.317**	0.330**	0.343**	0.351***	0.367***	0.367***
	(0.04)	(0.05)	(0.04)	(0.00)	(0.00)	(0.00)
Age	0.013	0.014	0.009	-0.030	-0.031	-0.031
	(0.83)	(0.81)	(0.88)	(0.13)	(0.12)	(0.12)
Female	-0.056	-0.092	-0.100	-0.620**	-0.572**	-0.574**
	(0.86)	(0.77)	(0.75)	(0.02)	(0.02)	(0.02)
Economics	0.019	0.008	-0.006	0.170	0.219	0.220
	(0.93)	(0.97)	(0.98)	(0.50)	(0.39)	(0.39)
Stocks	-0.037	-0.033	-0.020	-0.194	-0.136	-0.136
	(0.89)	(0.91)	(0.94)	(0.43)	(0.58)	(0.58)
Financial_News	-0.041	-0.044	-0.046	-0.141	-0.143	-0.144
	(0.74)	(0.74)	(0.72)	(0.14)	(0.13)	(0.12)
Constant	0.328	0.364	0.479	1.792***	1.747***	1.750***
	(0.83)	(0.81)	(0.75)	(0.00)	(0.00)	(0.00)
Observations	240	240	240	288	288	288
Pseudo R-squared	0.135	0.157	0.163	0.0828	0.0868	0.0872
Pseudo Log Likelihood	-140.1	-136.5	-135.5	-177.7	-176.9	-176.8
Base Log Likelihood	-161.9	-161.9	-161.9	-193.7	-193.7	-193.7

A.3 Additional Results and Robustness Analyses

Robustness analyses for Experiment 1. Due to the nature of our research questions regarding moral considerations in investment decisions and the context-rich experimental setup, one might worry that experimenter demand effects could have played a role in this study. That is, participants may have tried to guess the experimenters' preferred outcome, threatening both the internal and external validity of the results. In our setup this would mean that participants could have guessed the remuneration scheme and always invested with CEO A. Our results do not support this concern, however, as in roughly 40% of choices, participants invested with CEO B.[26]

In Experiment 1, participants first received the information on CEOs' earnings announcements, then participants made the investment choices, and then we polled their perception of the two CEOs' commitment to honesty. Therefore, at the point of making investment choices, participants are unlikely to have inferred that the focus of our study was the role of perceptions of CEO honesty. However, one might worry that participants' investment choices indirectly affect their perception of CEO $PV_{honesty}$ in a way that they perceive the CEO with whom they invest as more honest irrespective of the CEO's engagement in earnings management. To investigate this concern, we conducted an additional online questionnaire with students in a corporate finance class at the University of Zurich. Participants (N = 51, of whom 17 were female) were given the same description of the CEOs' earnings announcements as in the main experiment, followed directly and solely by the *CEO_PVHon* scales for CEO A and CEO B. These participants did not make any investment choices. We find practically identical results in this additional data collection concerning

[26] de Quidt et al. (2019) discuss ways to mitigate demand effects in experimental settings, stressing the role of proper remuneration schemes, anonymity, and a minimum of interaction between participants and the experimenter. As explained in Section 3, we were very careful on these issues when designing and executing the experiment. de Quidt et al. also recommend neutral instructions. However, as stated by the authors, there is little direct evidence that framing influences demand bias. For example, Abbink and Hennig-Schmidt (2006) find no framing effects in an experiment on corruption. Similarly, Dreber et al. (2013) find no framing effects in dictator games.

participants' perception of CEO $PV_{honesty}$. CEO A is perceived to be more committed to honesty (*mean* = 4.71) than CEO B (*mean* = 3.53) also in this sample, $t(50) = 4.47$, $p < .01$. A Kolmogorov-Smirnov test does not reject the hypothesis that the distributions of experiment participants and non-participants are identical ($p = 0.67$). These findings suggest that our results concerning differences in the perception of *CEO_PVHon* between CEO A and CEO B are based on the CEOs' earnings announcements rather than on participants' strive for internal consistency.

Since extant accounting research shows that trustworthiness affects investment choices, we control for its effect. First, descriptive statistics support prior research, as participants perceive the CEO A as more trustworthy than CEO B (Table A1). Table 2 shows that when participants perceive CEO A to be more trustworthy than CEO B, they tend to invest with CEO A, which further supports previous research (Hewitt et al., 2020).[27] Table A3 column (1) shows, however, that *ΔReturn* and *ΔCEO_Trustworthy* do not interact. Moreover, all effects of the main predictors (*ΔCEO_PVHon* and *ΔReturn*) and their interaction hold when we add the interaction between *ΔCEO_Trustworthy* and *ΔReturn* into the regression. Thus, perceived differences between CEOs commitment to honesty provide additional and subtle information, beyond perceived trust, that matter when investors make investment decisions.

In Table A3 column (2), we also test if differences in long-term orientation and willingness to make financial sacrifices between the two CEOs affect our findings. Participants considered CEO B as more short-term oriented, and less willing to make financial sacrifices than CEO A (Table A1). However, including these two variables and their interactions with *ΔReturn* does not affect any of the relationships of our main variables of interest. We neither find a main effect of these two variables on investment choices, nor an

[27] Since *ΔCEO_Trustworthy* and *ΔCEO_PVHon* highly correlate (see Table A2), $\Delta CEO\_Trustworthy^{\perp}$ was orthogonalized relative to *ΔCEO_PVHon*. In additional robustness analyses available upon request, we also change the order of orthogonalization. Thus, we compute *ΔCEO_PVHon* orthogonal to *ΔCEO_Trustworthy*. The same inferences regarding H2 continue to hold. In particular, the interaction between *ΔCEO_PVHon and ΔReturn* becomes more significantly negative, and the interaction between *ΔCEO_Trustworthy* and *ΔReturn* remains non-significant.

effect of their interaction with *ΔReturn*. These results corroborate that participants' perception of the CEOs' commitment to honesty measured through the validated, multi-dimensional protected values for honesty scale is a sound predictor of participants' investment choices, whereas perceived CEO long-term orientation and perceived willingness to make financial sacrifices, both measured with single-item scales, are not. Finally, we confirm that age, gender, and academic major do not affect participants' sensitivity towards differences in claimed future returns.[28]

Robustness analyses for Experiment 2. In the main analysis, we categorize participants as prosocial when they chose the cooperative alternative in six out of the nine *Investor_SVO* items. This method is in line with previous research (Van Dijk et al. 2004). Doing so, 18 participants do not fall into either of the two categories. For robustness, we run another analysis, using a median split: Participants who chose more than the median number of self-maximizing choices in the *Investor_SVO* task were categorized as proself and participants below or on the median were categorized as prosocial. Our main results continue to hold (see Table A5).

The results regarding investment choices hold when controlling for participants' financial savviness in addition to the demographic variables that we have considered throughout (Table A6). We control for (orthogonalized) differences in perceived trustworthiness (*ΔCEO_Trustworthy*) and find, similar to Experiment 1, that the more participants perceive CEO A as trustworthy compared to CEO B, the more they invest with CEO A. (Again, the order of orthogonalization does not affect the substantive inferences.) However, the inclusion of this variable does not affect our main predictions regarding the

[28] Results available upon request show that none of the variables interacts significantly with ΔReturn, though there is some tendency for economics students to care more about returns. Morever, including these interactions into the regression does not affect the significance of the interaction term between ΔCEO_PVHon and ΔReturn. We acknowledge that the field of study may not sufficiently capture differences among participants in their financial savviness, which may correlate with inferences and behavior in the experiment. In Experiment 2, we therefore also collected additional data on the financial savviness of participants.

behavior of proself and prosocial investors with respect to their own and the perceived differences in CEOs' protected values for honesty.

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